UNI

# UNI Program

**Editors:**
Marcos Kisil
Mario Chaves

**Consultants:**
Alfonso Mejía Vanegas    María Mercedes Villalobos
Alice Reis Rosa    Paulo Roberto Motta
Francisco B.Tancredi    Sebastião Loureiro
Jorge Izquierdo

Network Publications

# UNI Program

**Editors:**
**Marcos Kisil**
**Mario Chaves**

**Consultants:**
**Alfonso Mejía Vanegas**
**Alice Reis Rosa**
**Francisco B. Tancredi**
**Jorge Izquierdo**
**María Mercedes Villalobos**
**Paulo Roberto Motta**
**Sebastião Loureiro**
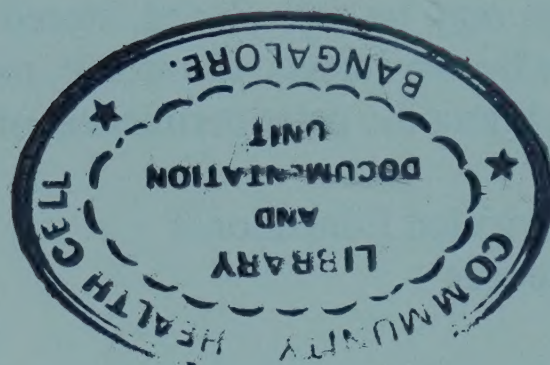
# Collaborators

- **Marcos Kisil**
  Coordinator, Latin American and Caribbean Programme, W.K. Kellogg Foundation

- **Mario Chaves**
  Senior Consultant, W.K. Kellogg Foundation

- **Alfonso Mejía**
  Consultant, W.K. Kellogg Foundation

- **Alice Reis Rosa**
  Dean's Assistant, Faculty of Medicine, Universidad Federal de Rio de Janeiro
  (1974-1981)

- **Francisco Bernardini Tancredi**
  Professor, Faculty of Public Health, Universidad de São Paulo

- **Jorge Izquierdo**
  Professor, School of Dentistry, Universidad Peruana Cayetano Heredia

- **María Mercedes de Villalobos**
  Associate Professor, Faculty of Nursing, Universidad Nacional de Colombia

- **Paulo Roberto Motta**
  Professor, Brasilian School of Public Administration, Fundación Getúlio Vargas

- **Sebastião Loureiro**
  Assistant Professor, Department of Preventive Medicine, Faculty of
  Medicine,Universidad Federal de Bahia

# CONTENTS

# CONTENTS

# Chapter Three: The Academic Component of UNI Projects

# Chapter Four: Concepts and Strategies of Integration with Health Services Through the Development of Local Health Systems (SILOS)

## Chapter Five: The Community as an Essential Component of UNI Projects

## Chapter Six: The Multiprofessional Team

# Chapter Seven: The Structure of Planning

# Chapter Eight: The Process of Organizational Change

## Chapter Nine: Basic Principles for UNI Project Evaluation

## Appendices

# Foreword

As the end of the century approaches, accompanied by rapid change that continues to sweep over the global village, new challenges and opportunities face us at almost every turn. To meet those challenges head-on, successfully, we all will need to share experiences, exchange ideas, and communicate new initiatives. By working together, we can set the stage for success now and in the next century, the next millennium.

Now, for instance, is the time to determine what type of health care system we want tomorrow. After all, students who are entering universities this year to study in the health professions will be the practitioners of the 21st century.

For that reason - to plan ahead and to facilitate future success - the time is ideal to share with a broader public, in a widely read language, the ideas and actions related to health education that are taking place in an important region of the world, Latin America. Language continues to be a barrier in our shrinking world, but by producing a publication in English we can open up important avenues of international communication for any new initiative.

The UNI Program is one such initiative. Created in 1990, UNI is based on the idea of establishing close links between universities, communities, and local health systems. In Spanish and Portuguese, the program's title (from which the UNI acronym was formed) literally means: "A New Initiative in Health Professions Education: Partnerships with the Community." That title accurately reflects the UNI Program's goal to foster union among the three key partners in each participating project (universities, communities, and the health services) and unity in actions toward common goals, with the university playing a leading role in each project.

These ideas, which provide the conceptual framework for the UNI Program, evolved from Latin American experiences in the last four decades. The seeds were in two seminars on preventive medicine, sponsored by the Pan American Health Organization (PAHO), which took place in Viña del Mar, Chile (1955) and Tehuacán, México (1957). In the 1960's, community medicine projects began to appear, linking universities with health services. In the 1970's, on the educational side, emphasis was given to educational technology and, on the services side, to the linkage of health services with the community, as clearly expressed in the Alma-Ata Declaration (1978).

Since Alma-Ata, primary health care has been emphasized the world over. In the 1980's, a collaborative project to assess medical education - the EMA Project - took place in the Americas; its results later were published in a book (1) that represented the regional contribution to the World Conference of Medical Education (1988) held in Edinburgh. The conference resulted in the Declaration of Edinburgh, which represents for health professions

education what the Alma-Ata Declaration represented for health systems development in the coming years.

The Kellogg Foundation has been supportive of all these movements in health professions education and health services development. With the belief that the time had come to support a program in Latin America that consolidated principles of Alma-Ata and Edinburgh Declarations and linked universities, communities, and local health systems, the Foundation initiated the UNI program in 1990. Invitations to apply for project grants were distributed among Latin American universities; out of more than 150 applications, 15 were selected for funding. Grants were approved in July 1992, and projects began in October 1992.

Early in the grantmaking process, staff and consultants of the Foundation wrote a preliminary version of this book, which used for discussion in the international seminars that took place during the formulation of UNI projects in 1991. The book was published in Portuguese (2) and Spanish (3) in 1994, and it seemed to those of us involved in the UNI Program that dissemination of an English version to a wider audience would be helpful. For instance, those in the Community partnerships programs supported by the Kellogg Foundation in its domestic and Southern African program areas might be interested in learning more about Latin American projects. Others may be interested as well, including health professions schools, which are members of the Network of Community-Oriented Educational Institutions for Health Sciences; the Collaborating Centers of the World Health Organization and the Panamerican Health Organization; the World Federation of Medical Education and its affiliate institutions; and international health units in health professions schools.

Although the UNI program is still at its infancy, progress to date has been encouraging. In fact, the Foundation's board has approved eight projects to add to the list of 15 that appear in Appendix 1. All of the projects are helping to assure that a critical mass of leaders is being built. These leaders come from the education, health services, and the community fields. Although these complex partnerships that make up the UNI projects are complex, they provide the holistic approach needed to tackle the problems affecting health systems in developing countries.

The Foundation gratefully acknowledges the collaboration of the authors of the various chapters of this book. Special thanks to one of them, Alice Reis Rosa, who with competently and meticulously reviewed and organized the initial Spanish and Portuguese editions.

Thanks are also extended to PAHO for the English translation of the book, and to the Network of Community-Oriented Institutions for Health Sciences for its publication and distribution.

All of us who are affectively, intellectually, and operationally involved in Program UNI will feel fully rewarded if the program, and this publication, contribute to the education and preparedness of graduates from schools in the health professions schools; to the increased efficiency and effectiveness of local health systems; and to the enlightenment and empowerment of communities for concerted efforts toward higher levels of health.

Marcos Kisil
São Paulo
June, 1994

## Bibliographic References

1. Educación Médica en las Américas - El reto de los años 90. Informe final del Proyecto EMA. Fondo Editorial FEPAFEM, Caracas, 1990 (Spanish Edition).
   Educação Médica nas Américas - O desafio dos años 90. Cortez Editora, São Paulo, 1960 (Portuguese Edition).
2. Programa UNI: una nueva iniciativa na aeducação dos profissionais da saúde. Battle Creek, Fundação W.K. Kellogg, 1994.
3. Programa UNI: una nueva iniciativa en educación de los profesionales de la salud. Battle Creek, W.K. Kellogg Foundation, 1994.

# Introduction to the UNI Program

Marcos Kisil and Mario Chaves

## W.K. Kellogg Foundation Working Philosophy

In 1930, when W. K. Kellogg, a pioneer in the cereal industry, established the Foundation that bears his name, he introduced a working philosophy and a set of values that continue to shape the Foundation's program goals today. Consequently, ideas such as "applying resources to solve peoples' problems" and "helping individuals to help themselves" have long symbolized the character and role the Foundation believes it should play in becoming an active partner in social development.

In Latin America, where the Foundation has been active since 1941, different societies and nations are faced with highly complex problems in their search for self-sustained development. These problems are intensified by the dynamics of current economic, political, and historical circumstances that impede access to goods and services, many of which are indispensable to the satisfaction of basic needs.

These social dynamics require that, in addition to constantly updating its programming priorities, the Foundation also looks for opportunities to support projects that can contribute to a better understanding of the social development process in Latin America. To identify such opportunities, the Foundation considers three elements, whose interaction it considers essential: 1) the idea; 2) the individual; and 3) the institution.

1. The idea should be creative and innovative, and should be aimed at solving actual problems that affect society, especially the most needy. The creative and innovative qualities should be relevant; for example, what may be creative and innovative in some circumstances, may not be so in others. Thus, when evaluating ideas that are submitted for consideration, the Foundation uses such criteria as relevance, suitability, feasibility, timeliness, and application.

2. Ideas belong to individuals who are moved to express them. These individuals, consequently, are responsible for the coherence of the ideas and are their natural supporters. These leaders of ideas search for a better world; they are capable of sensitizing other individuals and institutions. Thus, the well-being of a society depends on these agents of change, who can grasp reality and transform it.

3. For successful change, it is necessary that the leaders of ideas be part of an institution that is willing to adopt these ideas and provide institutional acceptance of the social change process.

   These three elements should be considered prerequisites in the preparation of the UNI Program.

## Why the UNI Program?

The Kellogg Foundation's general programming aim for the health sector is to contribute to the organization of a more coordinated, efficient, effective, comprehensive, and integrated community health system, accessible to all, meeting community needs. To reach this goal, various simultaneous programming strategies are required, including the development of local health service models, and models to train human resources to operate these health systems. Both models require leadership for their establishment and implementation, information systems to document processes, outcome, and impact, as well as proper dissemination to support relevant political and institutional decisions.

The Foundation's ongoing programming priorities in Latin America have included the education of health professionals and the development of health services. These priorities are evident by the type of innovative projects the Foundation agrees to fund, and were behind the Foundation's support for projects that established education departments relating to preventive, social, and community medicine in various schools in Latin America during the 1960's and 70's. Toward the end of the 1970's and during the 80's, the Foundation backed the introduction of the family-oriented approach in undergraduate medical courses and sponsored changes in dental schools. During the latter part of the 1980's, the Foundation established the Nursing Development Program, stressing primary health care, and in health administration, it provided significant support to the development of health service managers through its PROASA projects.

In 1987, as part of its continuing efforts to assess program priorities and prepare for the 1990s, the Foundation decided to conduct, or support, a series of analytical studies on its contribution to the development of four important health professions: medicine, nursing, dentistry, and health administration. These studies, which also examined the priorities for these professions in the 1990s, involved different methods and approaches. All, however, contained a component for critical assessment of experiences, strengths, and weaknesses, and explained the alternatives faced by each area, and priorities for self-sustained development. One such study, which was extremely useful for the Foundation, was "Educação Médica nas Américas" (Medical Education in the Americas) (EMA Project), already mentioned in the Foreword. The results of that study were published and distributed widely in the region.

Two points, gleaned from the different studies conducted in 1987, required further attention:
1.  The strategy of linking education in health professions with the health system itself is successful, but must be reviewed. The strategy should result in links between departments and professions, and involve multiprofessional teams during the entire undergraduate courses;

2. Conscious and responsible community participation, in projects linking educational and service institutions, has been one of the weaknesses of past projects.

With this information in hand, the Foundation decided, in the early 1990s, to continue its previous endeavors in the area of health education and health systems by launching a new program that would be aimed at increasing collaboration between health education and service institutions and the community. This program was called "A New Initiative in the Education of Health Professionals: Partnerships with the Community"(UNI Program).

The UNI Program represents a new step in the health sector development process and is an opportunity to consolidate past experiences and launch new efforts to achieve change in its three components: universities, local health systems, and communities.

The main objectives of the UNI Program are:
a) The promotion and support of synchronous progress in education, health services delivery, and in the community.
b) The establisment of models that can be replicated in these three fields and shared through networking by the projects involved.
c) The generation of support mechanisms for the projects, from their inception, including continuing evaluation and the dissemination of experiences, as well as of models and results.

It is expected that the UNI Program, upon completion, will have contributed to the development of:
a) Models of local health systems (SILOS).
b) Health professions education models.
c) Models for linking teaching and services "integração docente-assistencial (IDA) "based in SILOS and in work of multiprofessional teams.
d) Models of community participation in decisions affecting the health sector.
e) Models for local health systems with a family-oriented approach.
f) Models for community work involving multiprofessional health teams.
g) Appropriate technology for SILOS, whether for service delivery or for professional education.
h) New leaders in the health field.

## Strategies of the UNI Program

The UNI Program is made up of two basic, strategic elements: local UNI projects and support activities for essential elements of these projects.

Each local UNI project represents an entity in which the three central components (university, services, and the community) interrelate within a specific context, creating the

opportunity to improve the quality of life in the participating community. This is accomplished by the presence of an efficient, effective, and equitable local health system that delivers required services through properly trained human resources.

To identify prospective projects, the Foundation used an extensive communication process to disseminate its objectives to health profession faculties and schools in Latin America. In January 1991, more than 900 letters of invitation were sent out to medical, nursing, dental, public health, and administration schools in Latin America. The invitation announced the UNI Program and basic criteria for participation, and included a request for letters of intent from candidates for the program.

One hundred fifty-five letters of intent were received, representing all countries in which the program was announced. Analysis of these letters, by an advisory committee, led to the selection of the first 15 institutions funded for the program. Representatives from these institutions participated in three seminars that were organized to help them develop their proposals. These seminars, which took place between August and December 1991, were aimed at helping program participants achieve the following goals:
a) Identify their own needs and plan proposals to solve them.
b) Develop their potential in producing innovative proposals for the training of health professionals and to develop local health service models.
c) Achieve meaningful community participation.

Upon the completion of this phase, the Foundation received 15 proposals for the establishment of local UNI projects.

The Foundation organized support activities for essential elements of the UNI Program, based on four important premises.
1. Active protagonism by groups, as conductors of their own activities, is desired.
2. Using a gradual process for implementing project needs and satisfying different interests is most productive, realistic, and sustainable.
3. Activities for diagnosing, planning, programming, implementing, and assessing project goals should be parallel and simultaneous.
4. Interdisciplinary technical support is needed in the different phases of the project.

### Active Protagonism
Active protagonism is the main tool for arriving at a self-managed organization. It is achieved by each group running its own activities, and is instrumental in reaching project objectives.

Active protagonism requires full and complete knowledge that the group is the subject of the development process, or acts as the conductor of such, according to its own view of reality, expectations, and perceptions on how to make inroads to overcome its situation.

As a basic principle, active protagonism implies that technical support teams will use adequate instruments and methods to help groups develop skills in the following areas:
a)  Recognizing its role, identifying its needs, resources, and the social/political context in which it finds itself.
b)  Setting objectives and proposing alternatives for problem-solving.
c)  Performing and assessing actions that were aimed at achieving a specific, previously established objectives.

In addition, procedures used for a self-managed organization should consider the following three basic development levels:
1.  Training, which is understood as individual development of skills and capabilities of group members.
2.  Organization, which is seen as group development of diagnostic skills, planning, execution, and assessment.
3.  An increase in the range of power, which means real growth in the ability to make decisions that pertain to social responsibility.

### Using a Gradual Process
The basic concept implicit in this principle is that the procedures and processes used by a group to achieve goals must evolve gradually. This concept covers the following three areas:
1.  Objectives the group defines as priorities;
2.  Complexities of the processes to which the group commits itself in relation to the objectives;
3.  Capability of the group in approaching these processes.

The progressive approach to problems of increasing complexity is of utmost importance, and must always be according to the capabilities of the group, so that the objective to satisfy needs never exceeds group capability to conduct the process. Otherwise, the group might find itself releasing control to external agents just to avoid falling short of an objective.

To arrive at real development in the capability of controlling the process, it is necessary to pace it according to group possibilities. One should begin with small achievements that can be planned and performed by the group. As the goals are met, self-worth is affirmed, self-confidence grows, types of organizations are consolidated, and capabilities of the group increase. Thus, the group is in a better condition to face new projects of increasing complexity. In this endeavor, each phase is a stepping-stone. In this process called the ascending spiral, the primary basis is that this is the only possible way to learn and, consequently, arrive at group protagonism, and conduct its own process.

### Parallel and Simultaneous Activities
To set and attain an objective, one must consider the activities, the available resources, and

the context. In other words, is the objective realistic? Undertaking these activities (diagnosis, programming, execution, and assessment) in an orderly and thought-out way is what distinguishes planned action from improvisation. Only as the group itself thinks about and performs these actions can it really become a protagonist of the process; otherwise, it will continue to act as spectator and ordinary bystander.

To make active protagonism real, the sequence of project activities must be adjusted to coordinate with established priorities, and with the capabilities and the working pace of the group handling the project.

### Interdisciplinary Technical Support

Proper satisfaction of needs is crucial if a project's objectives are to be achieved. Since the aim is to achieve self-management and to link procedures and processes to the community's tangible needs, one should consider both the problems and the involved groups at a comprehensive level. Thus, even though a group may be dedicated to satisfying one specific need, approaching that need in a comprehensive manner requires considering all facets of the problem, and its implications and repercussions at all levels.

Consequently, the approach to any specific problem, and the proposal for its solution, must be of an interdisciplinary nature. At the very least, an analysis of the problem and proposed solutions should include contributions from other disciplines, to the extent possible. It is important to point out that the kind of multi-discipline contribution proposed here represents much more than timely contributions by each discipline separately. Instead, this approach involves a *simultanous* and *common* analysis of the problem by those in different disciplines. Naturally, each discipline's contribution will depend on its particular point of view or perspective; nonetheless, contributions will not come from parallel, isolated analyses. Through these strategies, one can learn about the importance and effectiveness of interdisciplinary contributions.

## Working Methods

"Working methods" refers to the main types of interdisciplinary work used in developing a project. We divide methods into the following three groups:
1. Those having to do with aspects of the relation between the technical team and interested parties involved, (such as associations, universities and departments, government agencies, etc.);
2. Those referring to forms of tangible work within the technical group;
3. Those that focus and direct the technical activities used in carrying out a project.

### Methods for External Relations
#### Working Agreements
This method basically consists of determining, jointly and explicitly, what type of working

relationship the technical group and groups of interested parties in the project will have with one another. Making this determination requires that the groups establish, clearly: the project's objectives; what each party will contribute to the process of achieving those objectives; which areas of work will be shared; and each party's role in the process.

With these elements clear from the beginning, each party will know what the common task is and what everyone's responsibilities are. There is also a distinct correlation between this method and the principle of gradualism. The working agreement, for instance, grows over time. This growth has two aspects: on the one hand, contents of the agreement become more profound and specific (as the group develops its skills to set goals, action strategy, etc.), and on the other, consecutive agreements should be established with increasing participation of interested groups.

### Work with Existing Structures and Leadership

To work with current leaders - those who are recognized as such by groups that are interested in the project - we propose some basic avenues of work that allow qualitative and parallel development of the community, the different participating establishments, and their leaders. Some of these avenues of work are:

a) Instruction of existing leaders. This method is aimed at making real community expectations feasible, and catalyzing energy for the completion of the project. It also helps institution meet project needs in their own organization; and boosts and stimulates participation.

b) Educating the community. This method implies a certain amount of reflection on the desirable features of current and future leaders, and on the limits and characteristics of the delegation of authority and responsibilities.

c) Promoting leader-community dialogue. This is done by organizing participation in decision-making.

d) Setting work levels. This involves deciding what the desired level of work and action will be from the community, and educational and service institutions.

e) Establishing procedures for changing leaders periodically. This involves generating mechanisms that allow community decision on the nomination or change of leaders.

### Handling Power Elements in Team-Community and Leader-Community Relations

Once power elements are recognized and managed by community leaders, it is necessary to use these elements to achieve real participation of all interested groups in the decision-making process. Three main elements stand out:

a) Information. Complete information allows us to think in terms of feasibility, and to select and decide properly. We believe that the availability of comprehensive information pertaining to a group problem is necessary for democratic action and participation. We also believe that dissemination of the information to other members of the community is vital .

b) Financial and other resources. Being able to determine the use of resources - and to

actually manage those resources - is one of the keys to successful group advocacy and self-management. Because universities are the "entrance door" for resources, and because participation is expected from communities and the health services sector, it is reasonable to examine community's role. How can those financial resources best be funneled from the universities so that they reach the community? How will the community participate in distributing the resources? These are the types of questions that should be addressed. It seems important to have special incentives for efficient community and SILOS participation, so that UNI Projects become effective and democratic.

c) Technical elements for decision-making. In making important decisions in a project, group members should have all of the necessary technical information. Still, this does not mean that the group needs to have all technical information and components related to the actual *implementation* of a decision. We want to emphasize that the team should find ways to transfer technical knowledge, allowing the group to handle and control the major guidelines of their own operations, although implementation can remain in the hands of technicians or professionals who are supervised by the group.

## *Methods for Group Internal Relations*

For the purpose of UNI projects, working as a group is of utmost importance. It is important because the UNI projects deal with change, and the very notion of change generates resistance and division among supporters and adversaries. In addition, UNI projects are complex and involve three groupsóuniversity, services, and the community; group work is intrinsic to the program. Furthermore, the three groups have different roles, work at different levels in the program, and have diverse amounts of power. For a UNI project to develop harmoniously, it is important to clearly understand the group make-up, and the dynamics of intra- and intergroup relations, and group relations with the community. Leadership of UNI projects must be multicentric, so that it occurs simultaneously in all three groups - university, community, health services.

Some of the ways in which the three groups' working relationships and tasks can be organized in a UNI project are as follows:
a) An interinstitutional group (university/service/community) that should be responsible for project political-institutional decisions.
b) An intra-institutional group, fundamental to handle needed changes inside each institution, in synch with the entire UNI proposal.
c) A project executive group that should coordinate project implementation and active community participation, through the entire process.

Institutional power structures, and their respective influence on the process of change, are an important consideration. Currently, power structures exist within Latin American universities at various levels: university-wide, within each department, within the faculty and student organizations, and frequently in personnel associations. Health service

providers have political power, bureaucratic power, and the corporate power of the various health professions. In the community, in addition to institutionalized political power of municipal governments, there are party politics, social organizations, and neighborhood associations, at different levels.

### *Methods Related to Process Activities*

It is obvious that the diagnostic phase must be regarded, basically, as a self-diagnosis of interested groups, since increased awareness of their own reality is essential for the growth process. Different aspects seem fundamental in this process of self-awareness, such as: knowledge of needs, their causes, and priorities; knowledge of existing resources relating to those needs; knowledge of external resources that can be mobilized and used; knowledge of the conditioning and limits of the group itself, and of the social context; as well as mastering of ideas, methods, and techniques, conceived by the group, relating to problem-solving.

There are two essential elements of participative programming: it must be comprehensive, or consider all aspects of the program, and it must be done by the group with the required technical support.

Programming also occurs gradually, in accordance with growth and maturity of the group. In the initial stage of development, it is not always possible to conciliate the group's need to see concrete results immediately, within the time frame required for finding alternatives.

With regard to actual execution, two basic points should be noted: the group confirms, through experience, its capability for setting internal limitations, preparing participating institutions, adapting the external environment, etc.; and the group actually exercises power.

The main task of the group should be the education of its members for the development of roles necessary for execution. If we consider the two evaluation possibilities (of process and results) the key method to be used, in this methodological framework, is related to evaluation of the process. It is essential that this be regarded as self-evaluation, because the purpose of this method is to learn through an action-reflection process. This process, to really be instructional and conscience-raising, must be broad and must cover not only the intrinsic problems of the community, but also the social-political context in which it is involved and by which it is influenced.

On the one hand, the role of the group will be to stimulate occasions of self-evaluation and reflection relating to actions (always difficult to introduce in a group primarily concerned with solving emerging problems) and, on the other hand, to propose systematic tools that enrich the reflection and self-evaluation process and make it more effective.

## Support Activities for UNI Projects

With the intent of making the UNI ideals feasible in different local projects, the program includes a series of support activities that can be summed up in six areas:

1.  The development of leaders: basic activity to support leaders of the projects and participating establishments, including the community.
2.  Technical support for the development of the academic model: contemplating activities for curricular revision, pedagogical support, faculty training, learning evaluation, research plans, etc..
3.  Technical support for the development of local health systems: contemplating activities to define a profile of needs, activities at the primary- and secondary-care levels, referral and back-referral mechanisms, information systems, management models, etc..
4.  Technical support for the development of community participation: contemplating educational activities for the community to understand the health-disease process, to practice self-care, be an active participant in decisions affecting the health sector, etc.
5.  Technical support for the development of project self-evaluation, as well as the dissemination of results.
6   The establishment of a network mechanism to facilitate the exchange of experiences among interested projects and institutions.

These mechanisms will allow interdisciplinary technical support so that the UNI Program achieves synchronized development of the different components in each local project, as well as articulation of ideals that can be properly disseminated to interested establishments.

## Final Considerations

The UNI Program has the university setting as its gateway; however, the program's goal is to improve the level of health and the quality of life in society, by considering health to be a process of dynamic balance between the individual and the physical and social environment. Health and quality of life are expressions associated with this dual individual-environment relationship.

The UNI Program is also exploring the balance between equity and social justice and cost-benefit. On the one hand, it tries to provide the largest number of individuals with the benefits of the health system; on the other hand, the intention is for this benefit to each individual to be as large as possible, in accordance with available resources. Overall, the two concepts provide the ethical and economic parameters for health system development.

There is a need for coalition-building among the three components of the UNI Program - and among the various health professions and between clinical practice, epidemiology and management - for society as a whole to obtain the best possible health care benefits at any given moment. Together, these coalitions represent the main movements that should be generated in the UNI Program.

Each UNI project should be held up to the measurements of space and time. Space is represented by the community - where actions will take place, with its service establishments and community organizations - and by the university schools in consortium for project implementation. With regard to time, we need to acknowledge that there are limits to the amount of change that can be undertaken in a given amount of time. A gradual transformation process is needed in the university setting, in the public health service sector, and in the community. This need for gradual changes further points to the need for strategic planning in the developmental stages of any UNI project.

We see the signs and bumper stickers that say: "Think globally and act locally." We might also add, "Think of the mid-to-long term and act today for the short term."

## Conceptualization of UNI Projects

Mario Chaves and Marcos Kisil

A broad outline of the UNI Program, which is expected to become a threshold in the development of health professional education, was presented in the previous chapter. After the program was announced, 15 project proposals (or "letters of intent") were selected for inclusion. The proposals were selected not only because they reflected the ideals of the UNI program, but also because they met the Foundation's criteria for feasibility and had a three-year implementation period.

In this chapter, we will discuss a typical - but imaginary - UNI project and visualize it in full operation, at the end of three years. Although this imaginary project is a construct - it does not actually exist - it will help us explain the process needed for making UNI projects become a reality. Like an architect who builds a house, we should know our project's composing parts; which materials we will use; and which procedures we must follow.

All of the 15 approved letters of intent shared certain common denominators, since the Foundation had established prerequisites for the selection process. Thus, the project began with a certain level of homogeneity in the area of ideas and action plans. This homogeneity, however, is very relative. Each institution involved in the projects faces a different reality, with different characteristics and challenges. It is important to recognize that, although these institutions share the ideals of the UNI Program, they interpreted the program's concepts differently in establishing making their project proposals. Therefore, the main objective of this chapter is to make the concepts of the UNI Program clear, and establish a basic glossary that facilitates intercommunication.

It is important to point out that UNI projects represent an uncharted course, a journey into the unknown that is a great stimulus to innovation. The loss of momentum in the development of IDA Projects* during the last two decades led us to take this bold step. There is no previous design, or blueprint, for UNI projects. As the saying goes: "We shall open our path as we walk."

* "Integración Docente-Asistencia" (Linkage of teaching and Services)

## UNI Project Components

UNI projects are complex. They involve working with things that do not yet exist - such as collaborations, working arrangements, and so on, which are as-yet only goals. As a result, the UNI projects are trying to reunite existing parts into a new whole. Let us see how.

We begin with three large components of these projects: the University, Health Services, and the Community. These three components have been linked in pairs in many different ways in Latin America, giving rise to a variety of well-known acronyms.

The idea of linking the university with health services - meaning linkage of teaching and health care services - first appeared in the 1950's, and was spread mainly in the two last decades.

The idea of linking health services with the community - represented by the acronym PHC, meaning primary health care - appeared toward the end of the 70's, after the Conference of Alma Ata. It has been interpreted as a strategy including, in addition to health services, the community and various types of intersectoral work - considerable expansion over what its name indicates.

Finally, the idea of linking the university with the community does not have its own acronym. However, it is represented by numerous efforts and projects still in vogue in Latin America. These projects involve university work with the community - the work is called "extension" or "community action" - and are not explicitly linked to health services. As a result, replication and dissemination are difficult. Moreover, although such models ease the financial burden on health care budgets, that burden is simply shifted: to the university budgets that than must maintain primary-level health care units.

Yet another acronym sprang from the modern tendency toward decentralization and micro regionalization. Those factors gave rise to the movement of establishing local health systems - "Sistemas Locales de Salud" - (SILOS) in Latin America, with the promotion and support of the Pan American Health Organization. These local health systems consolidate ideas contained in the PHC concept with those of social participation and local management and programming (1).

The three components and their relationships may be represented in a triangular shape as in Figure 1.

Although the UNI Program represents a continuation of previous experiences, it also contains important new dimensions. UNI represents a new *gestalt*. It adds specific new elements to the sum of previous experiences. Those elements include such things as: the multi professional team; emphasis on the pedagogical dimension; family approach; closer relations with the community; and synchronous development of leaders. Furthermore, UNI represents a multinational movement that includes technical cooperation among Third World nations. That technical cooperation contributes to the useful work of governments - supported by PAHO/WHO - in the development of SILOS, and tends to reinforce collaboration with universities.

Given this knowledge, it would not be pretentious to believe that the UNI Program could create new working relationships and mark the beginning of a broad movement of change, with significant benefits for society and health professions, once the projects are fully developed.
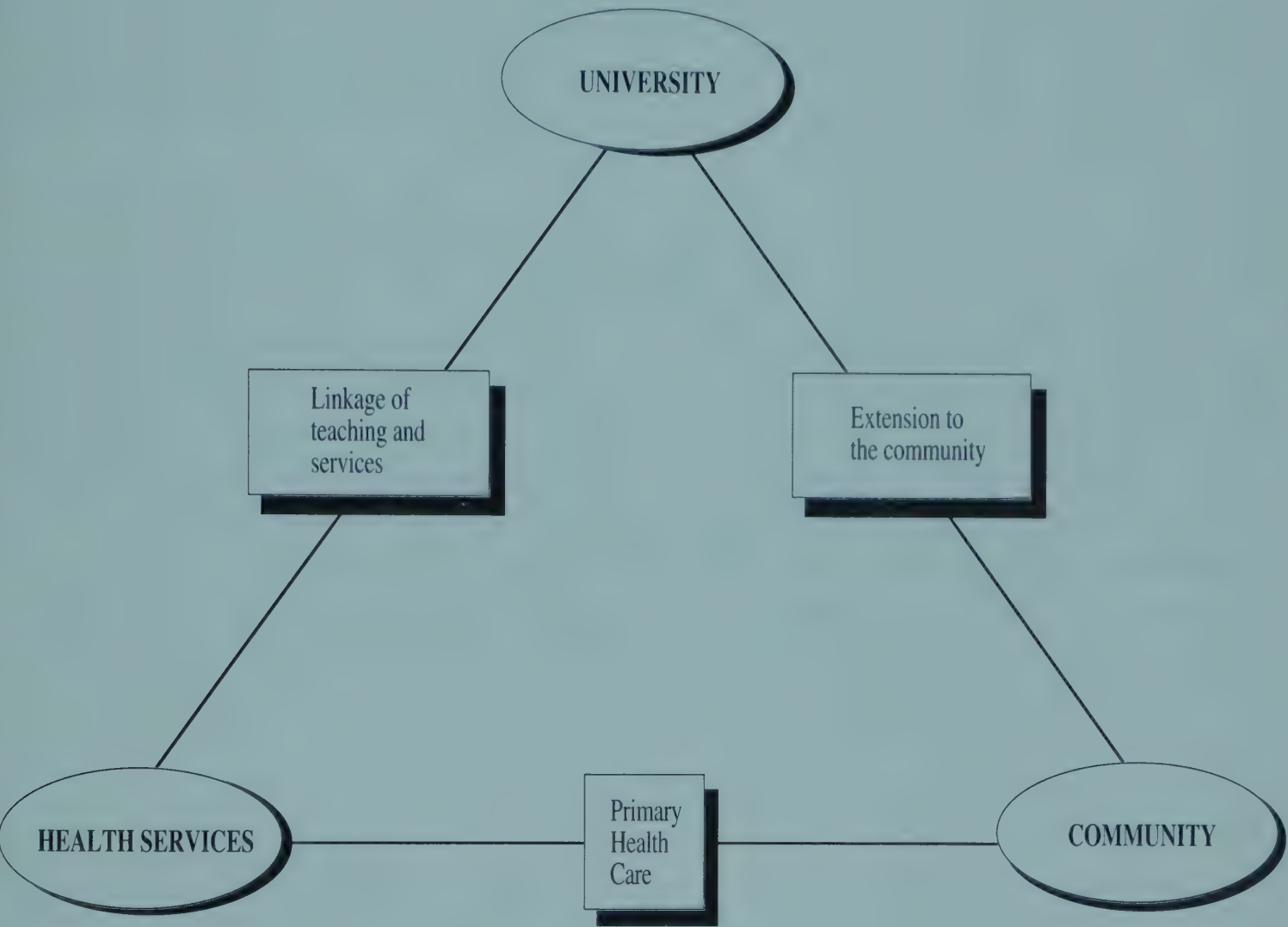
Figure 1. Components of UNI Projects

## Requirements and Expected Results from UNI Projects

Let us now analyze the requirements and initial criteria in relation to expected results or product from UNI projects.

In Table 1, the left column shows the requirements, which represent the selection criteria that were sent out with the letter announcing the UNI project. The right column shows the results expected by the Foundation upon completion of the UNI projects, as listed in Chapter 1. Selection criteria appear in a different order; the expected results were rearranged to correspond, horizontally, to the three  components of each project and to identify their two major objectives: the development of models and the development of leadership. Each member of the initial working group will have to not only exercise leadership in his or her institution, but also help train leaders in the various phases of the project.

The goal of the UNI Program is to introduce gradual, but profound, change in the way universities, health services, and communities relate to each other. By generating and implementing new models, the program is creating different ways of doing things, quantifiable change. Ultimately, the UNI Program could lead to the development of methods for categorizing and describing new models; that, in turn, would make it possible to define and assess models by group or type. Such a move would facilitate exchanges and international comparisons among projects in subgroups with similar features.

But perhaps the word "model" is not being used precisely with regard to partnerships with the community.  Perhaps it would be better to say that UNI involves the generation and implementation of new "modes of partnership with the community", since those partnerships encompass a variety of institutions.

## Building a Framework for UNI Projects

We need a model for a graphic representation of the main social actors involved in a UNI Project, the spaces they occupy, and interactions among them. Let us call this representation a conceptual framework as shown in Figure 2. This framework should make the explanation of our construct easier and should allow for the building of a common view about the position of each participant in the project, and a sharing of common objectives, so that all participants consider it their own project.

**Institutional Actors**
*The University*
By definition, the university has a mentoring role in UNI projects. As the funding institution for the projects, the Kellogg Foundation coordinates the UNI Program, which, in turn, is included in its health professional training program. The multi professional nature of UNI projects and the requirement that they have, at a minimum, the participation of medical and nursing schools - but ideally other professions, as well - will result in

## Table 1. Selection criteria and results expected for UNI projects

| Selection criteria | Expected results | Main institution responsible for results |
|---|---|---|
| 1. Identification of a community and geographic area in which the project will take place, so that a true established among the university, the local system, and the community itself. There should be effective participation of the community, through its representatives and leaders in the phases of planning, programming, execution and evaluation of the project. | 1. Models of partnership with the community. These models will involve self-care and effective participation by community residents in managing their local health system, and multiprofessional work teams from the university and services aside.<br>• The models will lead to development of new comunity leaders for work in health. | COMMUNITY |
| 2. Clearly academic character of the project, including activities of education for undergraduate students of the health professions, of health care for the community and of research, according to needs.<br>• Preparation of health professions at the undergraduate level, including collaboration among the various faculties, schools or courses, and emcompassing, at a minimum, medicine and nursing. However, participation also is desired from dentistry, public health, social service, and other professions (nutrition, physiotherapy, psychology, pharmacy, etc.) that may give an effective contribution to the health problems of community.<br>• Participation of health careers' teachers in community work. These teachers would be dedicating a significant part of their academic time to the community work.<br>• Emphasis in the preparation of undergraduate students on the general practice of their future professions. This would include learning experiences at the community-level, a program of sufficient duration for students to obtain the required competencies before graduation. | 2. Academic models of partnership with the community and health services, involving:<br>• Appropriate technologies for teaching and learning, coupled with delivery of services in health center or in the community, in uni-professional teams.<br>• Curricular adjustments to permit the work to be done during curricular time.<br>• Clinical, epidemiological, and managerial research activities that seek the solution of problems in the community and in the health services, attention to the other criteria in the left column.<br>• Development of new leaders in the field of health professions education. | UNIVERSITY |
| 3. Development of a local health system with at least two levels of care capable of meeting the prevalent health needs. In this system, the program of primary health care must include teamwork and a two-way referral system to a community hospital. The system must result from a close collaboration among the community, the health services, and the institutions for teaching the health professions.<br>• The local health system must contemplate activities of health promotion, including self care, environmental protection and improvement, prevention of health hazards, and basic health care at local level. | 3. Models of local health systems (SILOS) involving:<br><br>• family approach<br>• space and needed equipment for teaching and learning of the various participating health professions.<br>• attention to the criteria shown on the left column<br>• Development of new leaders in the field of Local Health Systems. | SERVICES |
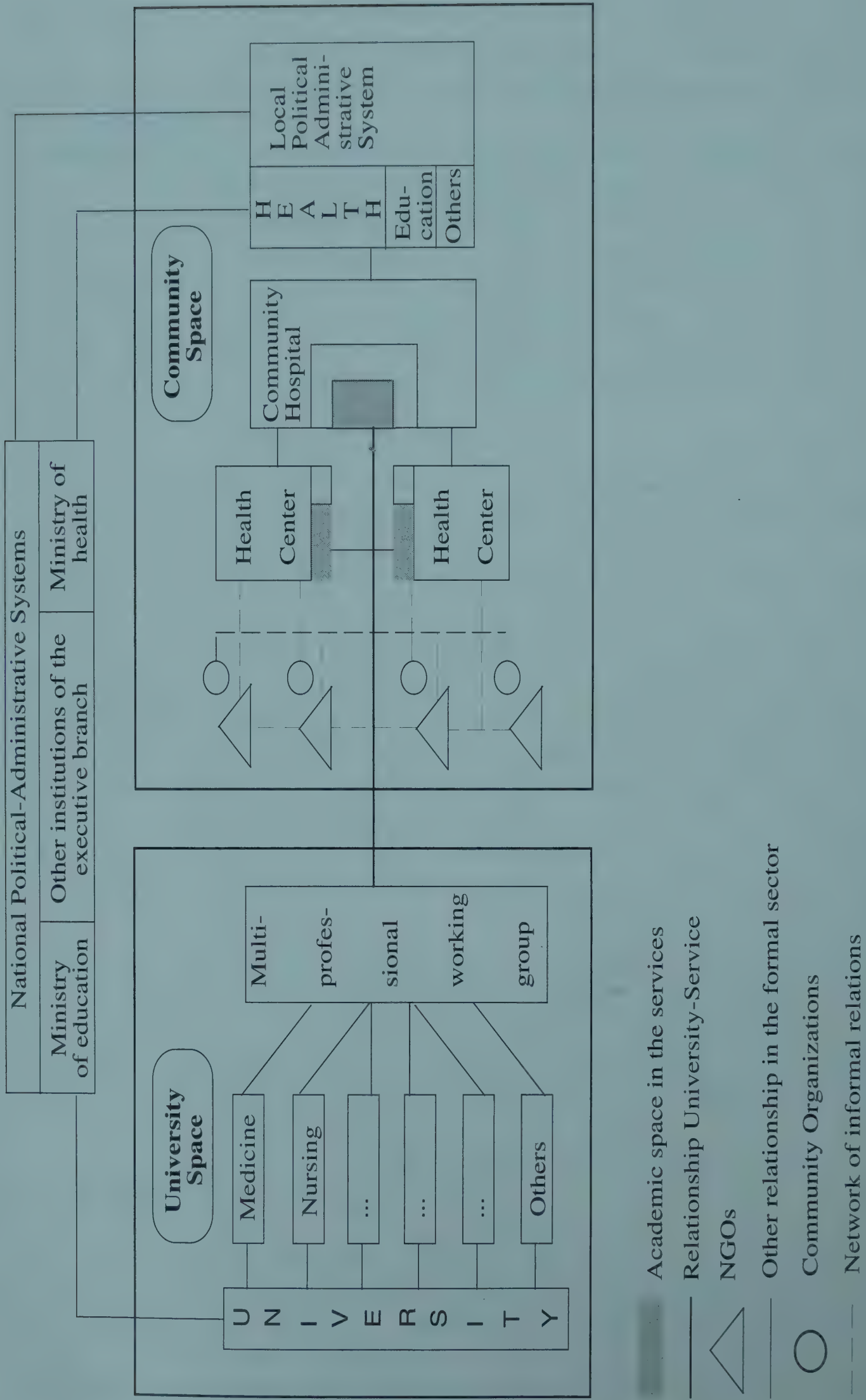
Figure 2. Conceptualization of a UNI Project - Institutional actors and their interaction

different types of working groups and, consequently, different professional interests within each project. Nevertheless, all professions involved in the projects will share a commitment to the inclusion of educational, service, and research activities in the academic component of the UNI project. They also are committed to creating a pedagogical model that includes a significant amount of time for curricular activities in the community. This will imply the redistribution of total instruction time available, since the intention obviously is not to increase the number of hours of undergraduate courses required for graduation.

## Services

We are calling health services, generically, "health services of the public and intermediate sectors." These services are represented mainly by the health components of social security systems and by subsidized philanthropic services. For now, we will not include the private sector, but will return to it when addressing the community.

In recent years, the evolution of the public sector in many Latin American countries has been influenced by a philosophical or intellectual bent toward viewing things in terms of the "system" involved. For example, such trends as the union of the public and intermediate sectors, decentralization, and micro regionalization all have focused on particular systems. These ideas are widely substantiated in the literature about local health systems (SILOS) that has been generated in the post-Alma Ata period. As a result, the work of UNI projects will be somewhat easier, since the health services sector is taking the initiative and main responsibility of establishing SILOS. Chapter 4 shows how UNI projects have totally accepted the SILOS idea as the basis for service models. Existing literature provides further evidence.

## The Community

Partnership with the community, the core of the UNI proposal, is not meant to involve a solitary institution, but a group of institutions. Consequently, partnerships with the community are not simple, two-part unions, but more complex coalitions with various institutional players. Here, we shall identify a few of the main groups of participants with whom, depending on the community selected, a university should interact, associate, and unite for the purpose of UNI projects.

In addition to the health services already mentioned, those that constitute the formal health system, we first should consider two other sub sectors that deliver health services: the informal sub sector and non governmental organizations (NGO's).

The "informal sub sector" has been described as:

"acting outside of the state and formed by groups of residents or solitary sectors who build health organisations with their own efforts: small consulting offices, medical posts, or community centres. In some countries, traditional medicine has become one of the coveted services of this informal health sector..... In the informal sub sector, the

ownership of a non-profit consulting office or medical post is a reality that escapes the formal health sector, represented by universities, hospitals, clinics, and other establishments" (2).

Local NGO's are mostly: "popular organizations established at the local level, usually in rural or marginal urban areas, whose beneficiaries are both members and constituents of the organization."

"It could be said that local NGO's represent organized social participation, in groups with different characteristics and with diverse objectives, largely and eminently" of an assisting nature. "In others, NGO's adopt the form of popular committees, volunteer clubs of mothers, drinking water associations, neighborhood committees, religious groups with health activities, comprehensive children's centers, centers for milk, volunteer youth organizations, self-help groups, common soup kitchens, popular food distribution centers, common purchase committees, ecological groups, health study centers, centers to assist street children, housewife committees, alcohol and drug addiction rehabilitation groups, cooperatives of medical posts and "salitas," community health centers, and popular child care centers. All of these groups form teams of direct assistance to uncovered populations with medical posts, health centers, and their own health personnel" (2).

Secondly, we must consider organized community groups who do not actually deliver care, but are users and beneficiaries of the health system, and who, after final analysis, represent various subgroups of the population in general. An expanded concept of self-care would apply to these groups. Self-care in health at the individual, family, and - by extension - community levels represents active protagonism by the community in UNI projects. Some groups mentioned in the citation above, but who do not provide services that parallel their resources, are part of this second group.

Thirdly, we must mention state institutions that operate at the local level; these would consist mainly of political/administrative systems, such as those that are in charge of education, social action, housing, sanitation, etc. Discussion with these entities is essential if the UNI projects are to hook into the PHC strategy of linking primary services and the community.

Finally, a fourth group would consist of private institutions, corporations, religious and recreational institutions, and agencies for social communication that may not participate directly in the UNI Program, but may be able to support it indirectly, nonetheless.

## Settings for UNI Projects

Now that the main institutional players of the UNI projects have been discussed, let us consider their settings. UNI projects develop basically in two scenarios or settings: first,

in the university setting, represented by the campus or locality occupied by the mentor institution; and, second, in the community. We separate the two, because normally a university that is involved in a UNI project will not be located within the same geographic boundaries as the involved community. Even if this does occur, a university would be likely to have its own separate "space" or setting within a community.

*The University Setting*

Each university setting consists of various departments whose effective participation must be assured from the beginning of the project. It is desirable that internal consensus be established as early as possible during the formulation period. In this phase, it is desirable that groups be formed internally in each department and that the groups be capable of assuring and maintaining their respective departments' support for the project. It was for this reason that we previously described members of the "working group" as leaders in their institutions, and the reason for the UNI requirement that universities work to develop leadership at the department level.

University working groups also should not neglect to keep authorities at their institution - at the highest levels - constantly informed; they also should seek approval from these authorities for the various intermediate phases that lead to project formulation. In larger institutions, it may be desirable to establish a steering committee - consisting of the higher-level authority figures - in addition to the project's basic working group.

The conceptual framework presented in Figure 2 shows a comprehensive view of the various components and sub components of the UNI project, including a view of inter group dynamics. The space at the left of the diagram reflects what has been mentioned about the university setting, and shows departments that relate to the health area. This is the area in which the directing group would be situated. The "multi professional work group" created by the institution for the specific purpose of forming a UNI project, is situated to the right of uni-professional departments. Since this is the core group in the formation process, it is fundamental that this group remains active during the entire process; this group's continued involvement and support will assure continuity and integration.

*The Community Setting*

This is the main scenario of the project, the reason for its existence. Two of the three components make up this space: the service component and the community component itself. Returning to the subject of institutional participants, one should consider how four participants, or groups of institutional participants, appear in the framework.

The first corresponds to the very services involved in the service component of the project, and represents the formal sector of the health system. In the diagram of Figure 2, we show two levels, including two primary units and one secondary unit. It is important that the university has a separate physical space available at each level, so that there is a place in

the health unit for faculty and students, without affecting the hierarchical structure of the local health system.

Secondly, we feature local community organizations. Some may deliver services, others may be of an associate nature. Their different traits stem from the different ways in which they originated and from the differences in their purpose. These are represented in the hexagons in Figure 2.

Thirdly, the NGO's are shown in the form of triangles. As in the previous case, NGO's can deliver services or provide technical cooperation and financial support to local community organizations, sometimes even to projects that integrate social development with productive aspects. The above mentioned study on NGO's, which is part of the SILOS publications, points out the importance this group may have in community settings.

Finally, we must address the local political/administrative system, or state entities that operate inside the community. We do not believe that the community component is represented by the formal sector, whether by health services or the highest level of local administration. The presence of formal political/administrative state systems in the community deserves special consideration, because the role they can play is very important, particularly with regard to initiatives and work done by community organizations in matters that are the responsibility of the state. It is not a question of passing state responsibility on to the community, but one of making sure that the community does not remain eternally responsible for certain initiatives. Formally, the statement "health: right of the citizen and obligation of the state," cannot be taken as such, or the community will be left believing and expecting that the state will someday provide all the required health services. The UNI projects do not defend a paternalistic state serving passive communities, but instead seek an active protagonism by the community and its important participation in the decision-making process. For this, it is necessary to facilitate the process of community organization, so that this desired empowerment becomes a reality. One of the difficulties frequently encountered in work with community organizations, is that they can be used or manipulated by party politics. Careful research, action, and management will be important to each working group and, consequently, to its subgroups in the community. It will be instrumental in finding ways to begin and maintain community programs that lead to genuine partnerships with the community, partnerships that are not a permanent source of conflict.

*The Third Setting*
"The third setting" refers to all institutional aspects that affect the amount of flexibility permitted for innovation in the UNI Program. We are all aware that the various establishments involved in the UNI Program - universities, health systems, municipal administrative systems, and corporations - have their particular prescribed sets of action and constraints; these constraints and predetermined ways of doing things limit the flexibility needed for reform and innovation at the local level. Thus, the third setting is the one that imposes limitations on self-management of the local system.

The first two settings - universities and communities - concretely define the two geographical areas for UNI project activities, areas that allow for direct and immediate action. The third, however, is the setting for indirect action. Although a UNI project naturally will have to deal with the limitations inherent in this third setting, the project also will have the opportunities - as it demonstrates success - to influence the policies, standards, and regulations that form these limitations. Doing so will allow a project to provide the cornerstone for a more efficient and effective way of educating health professionals, delivering health services at the community level, and establishing a union among the institutional participants who deliver services and, ultimately, to those who benefit from the system. It also will lead to models that may be replicated, with a view toward influencing policy, legislation, and regulations on a higher level.

## Inter Institutional Relations

In the introduction, we mentioned that the UNI Program is an extension of previous experiences of IDA in Latin America, of the application of the primary health care strategy (using SILOS as the operational tactic), and previous studies on the direct link of the university with the community in a process sometimes called extension or community participation. Because the UNI projects want to take a daring step ahead in the area of partnership and collaboration among participants, it will be indispensable to pay attention to anything that might affect relations among and between people, groups, institutions, and the community. In the university setting, during the daily routine of a UNI project, much attention must be given to preventing conflicts. The proverb "an ounce of prevention is worth a pound of a cure" is relevant to the UNI projects. As the mentor, initiator, and grantee, the university will have to take special care in relations with its partners and even in its internal environment. There is a need for cooperation between people and groups in the internal environment - at the university-wide level and within its power structures, as well as inside each participating department.

Some amount of organization also is required among groups outside of the university. An inter institutional group to coordinate project activities in the community was already mentioned. In certain situations, when there are a large number of community organizations, or of NGO's, it is possible that they may need some help, or even nudging, before organizing into groups. Only the consideration of specific situations can determine whether "motivational" work is desirable or necessary.

The same care is needed in relations with the local political/administrative system, especially with regard to education and social action. Successful relations with those types of external groups will depend on the establishment of alliances or coalitions. Leadership must be shared by the various project components; it is also possible that resources allocated to the project will need to be shared.

Overall, multi institutional activity, as proposed under the UNI Program, will depend largely on dialogue, clarity, and coordination of relations between people, groups, and institutions. It is necessary to create an environment of mutual respect and benefits. Leaders involved in the project should be instructed in how to work in groups, since the projects imply certain changes and institutional adjustments that will only take place with the presence of democratic leadership. This type of leadership stems not from the actions of one charismatic leader, but from an inter institutional group sharing common ideals.

## Bibliographic References

1. PAN AMERICAN HEALTH ORGANIZATION. Sistemas locales de salud (SILOS). Bol. Of. San. Pan., v. 109, nos. 5 and 6, Nov.- Dec. 1990.
2. MANTILLA, F.L.: Las organizaciones no gubernamentales y los sistemas locales de salud. Op. cit., no. 1, pp. 512-20.

# The Academic Component of UNI Projects

Alice Reis Rosa

We have reached the last decade of this century with numerous studies, documents, and articles about the education of health professionals, as well as new guidelines to reformulate the education of these professionals.

In medicine, for example, there are publications from the last World Conference on Medical Education, in 1988, and the EMA (Medical Education in the Americas) Project, from 1987 to 1989. An attempt to identify universal principles in the medical education process was summarized in the Declaration of Edinburgh (1).

The Declaration mentions the need for correction of 12 critical points in medical education. (These points also were identified in other health professions.) As for the EMA Project, we must emphasize that it stimulated each of the 17 participating Latin American countries to establish a midterm action plan for the development of medical education. The actions that were suggested most frequently pertain to curriculum revision, the linking of medical schools to health services, education methodology, pedagogical preparation of professors, work as a multiprofessional team, research, information in health sciences, and continuing education. It can be assumed that many of these actions are also applicable to other health professions.

Clearly, the UNI Program is not made up of new premises. However, it is reasonable to ask: "In which and in how many institutions have these premises been applied?" "How many of those premises are being used to orient the training of future health professionals?"

To ensure that some of the recommended changes and actions listed above actually do become a reality, we must make progress in creating innovative educational models and in finding new ways to improve professional skills in the health field. This is the goal of the UNI Program; it was based mainly on conclusions and recommendations that were made after the teaching and health services experience (IDA) in Latin America (2) was assessed. Consequently, UNI projects must transcend the accomplishments of previous IDA experiences in medical schools, as well as in the provision of services.

Selection criteria for the UNI Program - which requires a firm commitment from institutions in project development - already denote different experiences with regard to teaching and services. The latter were often conducted by small groups of professors - generally from social and preventive medicine departments - without being submitted to the schools' decision-making processes and with little or no participation by clinical faculty. They were characterized as exclusively departmental activities and did not have repercussion in medical schools. In UNI projects, an orchestrated effort is indispensable,

not only because of the significant requirement of time from professors for educational activities, research, and health care in, for, and with a community, but also because of the importance of teaching hospitals about the organization and development of primary health care.

Two other conditions are required, because this is an initiative intimately linked to the education of professionals:
1. Curricular activities developed in health services, in other community social services, or in the community itself, should be directed, in principle, to all students;
2. These activities must be related to the curriculum, and must provide feedback for the decision-making process relating to organization, selection of program content, and education and evaluation methodology.

UNI projects should serve as a stimulus for change in the courses required for graduation. Step by step, by consecutive adjustments, and in accordance with the service model, these courses should attain a higher level of community orientation. They also should attain increased coherence among the constituting elements, and greater congruence between educational and occupational profiles, taking into consideration population morbidity and mortality rates.

There are, however, certain academic activities in previous experiences relating to the integration of teaching and services that do not conform to UNI projects. Such activities should not be under only one department, nor should they be restricted to community and preventive medicine, epidemiology, ecology; they should not be elective for students, or be of short duration, insufficient to allow for the interaction of professors and students in new education/learning environments, research, and health care.

Apart from their uniqueness, institutions responsible for UNI projects deviate to varying degrees from the selection criteria. Consequently, they will begin from equally different starting points. Some will work to begin innovative experiences, while others will refine and improve these kinds of experiences. Thus, the service and educational model will differ from project to project. Nevertheless, all should have an epidemiological base; should be interdisciplinary; should involve work as a multi-professional team; and should consider in-service teaching/learning as their common denominators.

UNI projects will have to find ways to overcome the tendency to work in isolation and the corresponding lack of communication commonly found in the health service delivery system and the education of health care professionals. Similar characteristics will have to be overcome in the working relationships between the service delivery system, the education system, and the community they are to serve; among courses of the various health professions; and between departments and disciplines of the same course.

This tendency toward isolation and lack of communication has led to unsatisfactory services and the hiring of professionals who are inadequately prepared for occupational requirements. Other results include: insecurity among recent graduates, who do not feel prepared for practice; dissatisfaction in society, because of service fragmentation and its consequences; rising costs; dehumanization of care; and dwindling of the physician-patient relationship. And what about medical schools? They seem to be removed from all of this, as if the resolution of these problems were not also the responsibility of professors. The majority of professors are merely concerned with the indication or execution of diagnostic and therapeutic procedures within the narrow limits of their scientific disciplines.

The UNI Program, therefore, is a challenge. It challenges us to learn new ways of working together and forming partnerships, and to change the education of health professionals - an education that is vital to quality service delivery.

## Educational Priorities

In Latin America, the undergraduate course is expected to prepare graduates for immediate independent practice, as well as provide general education for this purpose. One of the principles for the orientation of UNI projects, then, is to reinforce education toward general practice in future health professions.

One of the basic questions for the development of health professional education that must be addressed in these projects is a clear definition of the final product of these courses. This subject has pedagogical as well as social implications.

In medicine, for example, the "product" is defined as the general practitioner. This does not contradict the idea of a broad basic education, nor the belief that general practitioners, general pediatricians, and OB-GYN graduates would, respectively, be the adult, child, and women's clinical doctors.

The professional profiles of each of these physicians, however, is unsatisfactory. Generic descriptions of the skills expected from them are inadequate for the selection of educational strategies. To choose the path, professors and students must know where they want to go.

As if the lack of precision with regard to the abilities of clinical doctors - in diagnosing and treating disease - were not enough, their responsibilities with regard to public health and the actions expected of them in that area, also need to be defined. Today, public health is considered too important to be left only up to public health officers (3).

This leads us to another point to be explored by the UNI projects: the integration of preventive practice into clinical practice. Early detection should be among the skills of clinical doctors. However, by "early detection" we do not mean simply "early diagnosis."

Instead, we are referring to the ability to diagnose conditions or diseases before the symptoms appear and before the individual and his or her family become aware of them. For example, there are good reasons for routinely taking a patient's blood pressure, regardless of his or her present complaint.

Today, the importance of the clinical doctor's role in prevention is recognized. Studying case findings in clinical practice, and screening an entire population, are considered complementary interventions for early detection. A quote from the "Guide to Clinical Practice" follows:
"The case finding strategy of prevention breaks down artificial and harmful barriers between those primarily concerned with public health and those chiefly occupied with therapeutics. Our view is that a concurrent and complementary practice of treatment and prevention can enhance the quality and effectiveness of both" (4).

Thus, UNI projects should try to define the role of clinical doctors in disease prevention, stimulate them to perform clinical actions of a preventive nature as part of daily activities, and produce a set of procedures to be performed for this purpose (breast palpation, rectal examination, fundus of the eye, etc.). Projects should also make clear that counselling and health education activities may and should be performed by clinical doctors aiming to promote health. They should give attention to lifestyles and support critical "life periods," such as childbirth, (female) menopause or (male) climaterium, and retirement.

Adding prevention to a clinical doctor's activities does not imply disregard for the importance of preparing the future physician for major responsibilities: disease diagnosis and treatment. In this regard, clinical skills of general practitioners are being expanded. There are clinical medical residencies to complement training, not only in dermatology and mental health, but in surgical specialties, with a view toward learning diagnosis and treatment of non-surgical infirmities in gynecology, urology, proctology, otolaryngology, and ophthalmology (5). When residency is completed, the type of skills a practitioner is expected to have mastered are clearly defined - for instance, the indication and performance of procedures, such as vesicle catheterization, abdominal paracentesis, lumbar puncture, deep vein catheterization, fundoscopy, otoscopy, nasal packing, gynecological examination, including colposcopy and sample collection, etc. However, could it be that these skills cannot be acquired in properly planned undergraduate courses?

Similar questions exist in relation to nursing and dentistry personnel training, in addition to those relating to the vertical organization of work (professionals, technicians, and assistants).

It is critical that, as part of training for health professional general practice, multi professional cooperation be introduced into the teaching/learning process, using practice as the starting point. The UNI project service model should be led by multi professional

teams and involve collaboration between the different technical areas, such as medicine, nursing, dentistry, nutrition, pharmacy, social services, psychology, etc. "Each area shall perform the task according to its specificity, complementary and interdependently, to assure a framework and rhythm that meet community health needs" (6).

We already have the example of well-defined multi professional teams in surgical centers, rehabilitation services, enteral and parenteral feeding, dialysis, etc. UNI projects should try to use human resources to perform tasks to assure the timing, effectiveness, and lowest cost of primary health care actions. This will avoid duplication of activities and unnecessary delegation to others. It also will require the definition of limits and overlapping skills among various health professionals, and should be reflected in the skill profile of individuals emerging from UNI projects.

Another point requiring attention in UNI projects is the technical-scientific training of students. It is common to find a certain antagonism in the academic environment to ideas about education for general practice, health services, and for primary health care delivery. The reason for this antagonism is the belief, by some, that education in the area of general practice involves teaching professionals with doubtful qualifications to serve the underprivileged populations in places far from urban centers.

This thought process is a mistake. The notion of accessibility and equity in health system organization cannot be disassociated from the notion of health care by qualified personnel. Those qualified personnel must be able to discern between medical problems that can be solved with available resources, and problems that must be referred - adequately and in time - to health institutions with appropriate technology.

UNI projects should foster solid, basic education that allows for competent practice of the profession at any level of the system, according to the circumstances and capability of each level. For this goal to be attained, needs have to be satisfied in relation to the enhancement, updating, and maintenance of professional skills, through postgraduate courses or continuing education. This objective should be clearly spelled out in the strategies to be selected for teaching/learning in these projects.

Projects for the re-examination of the teaching of basic disciplines also must be addressed. It is understood by some that this education is justified by the application of these subjects to clinical education. Others consider them basic for the development of a scientific thinking model. In addition, there is a growing tendency to fight the traditional separation between the basic and professional educational phases, which "favors the erroneous interpretation that science is a prerequisite and not an integral part of clinical medicine" (7).

Thus, it would be opportune for the UNI projects to re-examine the question with regard

to the characteristics and skills expected from graduates, their training for general professional practice, and advances in the fields of molecular genetics, cellular biology, immunology, and neurobiology.

## Educational Strategies

Once a commitment is made to the idea of forming partnerships with the community, a community's health needs should significantly influence the prevalent education practices in undergraduate courses. Objectives, program content, teaching methodology, and evaluation procedures should be consistent with each other, using as their reference the individual, family, risk groups, the community, and environmental health needs, as well as the service model organized to handle them.

### *Program Content*
The epidemiological base of UNI projects should reflect the selection of program content based on the following criteria: relevance to the solution of health problems; and the balanced distribution of teaching/learning environments among different levels of care, according to generated demand by health problems.

Usually, undergraduate courses are organized by disciplines, which means teaching a certain content for a specific time. Time becomes the object of dispute in curricular reform that implies changes in timetables. The dominant idea is that content is too big and time is too short; however, the criteria used to define content are rarely discussed.

Community orientation and the use of the health service model to teach medical practice compel us to define relevant criteria for selecting content, such as: high prevalence, significant morbidity and mortality, and the possibility of prevention or cure. This does not mean that students are not familiar with less frequent problems, or current diagnostic and therapeutic resources.

Content is usually defined by specialists in the field who are inclined to teach: subjects at the leading edge of knowledge, instead of more common ones; without consulting morbidity and mortality data; and without considering the relationship of subjects with other areas of knowledge.

How can we change such deep-seated habits so that professors begin to consider the skills that students must acquire, and think about the performance expected of them in problem-solving?

To consider skills means to think about the goal of planning an educational program, contemplating the activities inherent to professional practice (collecting information for a personal history, performing a physical examination, entering data in medical records,

execution of diagnostic and therapeutic procedures, etc.), and taking into account the knowledge, capability, and attitudes necessary to perform these activities, as well as the situations in which they occur.

The definition of competencies - not only clinical, but also in relation to research, service management, interaction with patients and other team members - is basic in the development of health professional education. These definitions are used to improve: planning of professional education at undergraduate, postgraduate, and continuing education levels; the choice of program content and learning experiences; the selection of procedures to measure performance, that is to say, the correct execution of activities.

### Teaching Methodology
UNI projects feature three areas of teaching methodology: the diversification of teaching/learning settings; in-service training, and learning experiences in multi professional teams.

Professors and students reject the idea of leaving tertiary-level hospitals to train in less complex units. They seem to forget that we only need a small number of personnel to work exclusively in university hospitals, or other settings with advanced technology. Therefore, teaching/learning should take place in the different real situations of professional practice, ranging from health posts to health centers, out-patient clinics, and secondary-level hospitals, where the great majority of students will practice their future professions.

The use of basic services to train students does not imply, in any way, the loss of scientific quality in education. This preconceived notion is common, mostly among medical professors who don't understand that, without proper training, physicians will be unlikely to take on their responsibilities at the primary level of care.

The balanced use of services at various levels for undergraduate student training - and the period spent learning at each level - should reflect the epidemiological base of the course itself and skills that the student should learn. An inevitable question about UNI projects relates to the time that should be allocated to teaching/learning in basic health services. In essence, the learning period should be as long as is necessary to acquire indispensable skills for solving the problems that will be encountered at different health system levels. Future professionals should recognize demand at these levels, available technology at each level, and referral and counter referral mechanisms among them. We must stress how vital this is in teaching students to distinguish between what they are capable of doing and what is beyond the scope of their skills; if students learn to recognize when patient should be transferred to other levels of care, the patients will receive better diagnostic and therapeutic services.

It is also important that, from the beginning of their education, professionals recognize the ways in which general practitioners complement the practice of specialists. Professionals

also should develop a respectful and committed attitude about those complementary relationships, so that they can maintain effective referral and counter referral procedures.

Another key to the success of UNI projects is this: basic services must have the installations, equipment, supplies, drugs, quality control, etc., that are necessary for providing adequate technical education. The very skills to be learned by students may lead to decisions about instruments required in basic health services.

Studies indicate that the best method for developing proper attitudes is to blend with the environment. Therefore, it is essential to give students the opportunity to participate directly in community assistance - witnessing problems and a community's physical, social, and cultural reality. Doing so will teach students to value social factors, and to balance those factors with their biological knowledge. Given these opportunities, students will better be able to comprehend the health-disease process in its individual and collective dimensions.

Students are not expected to have lectures or demonstrations in community services, except when necessary. "Learning by doing" should predominate. This can be described as "interaction of the student with the environment, with learning taking place through active participation: the student learns from what he/she does, not from what the professor does" (8).

According to the Declaration of Edinburgh, active learning is one of the universally accepted principles in medical education. This premise is applicable to education in other health professions, because the speed of progress and the quick obsolescence of knowledge makes active learning a requirement. There are those who believe that one of the main purposes of undergraduate courses is to stimulate students to take responsibility for their education and to learn from each other, to voice their opinions and consider different points of view, as a base for continuing education.

The principle of active participation by students leads to an increased tendency toward using the problem-solving method - also recommended in the Declaration of Edinburgh - which involves tying scientific education and training together for the delivery of services. This method can be tailored to the practice of any health profession that involves having patients come in for the solution of problems (cough, hypertension, skin lesions, fractures, cavities, etc.). Ultimately, it teaches students to use logical thinking in dealing with each patient's problems. Considering the advantages of the method, UNI projects should promote the use of this modern educational technology in undergraduate courses.

Another way to stimulate active learning and strengthen the desirable scientific trace in professional education, is to plan student participation in scientific research projects developed in the community.

The third teaching methodology that is featured in UNI projects is: the organization of

learning experiences for student groups of different careers. During the undergraduate period, multi professional educational activities are geared toward the development of sharing and interdependent teamwork.

While students from different courses can be assembled to study subjects of common interest (basic health and disease mechanisms; health and the environment; professional ethics, etc.) the idea is to unite them in the performance of real tasks and procedures, not programmed artificially, so that they may learn how their individual actions complement, strengthen, or make other actions superfluous. During these experiences, students should be made aware of the timing, cost/benefit, and efficiency of the actions taken.

### Supervision of Learning

The supervision of community service learning experiences is another decisive element in UNI projects. It may be performed by faculty or service personnel. The lack of interest by the majority of professors in this type of activity, however, is one of the barriers to creating a commitment - by future health professionals - to the different health and social problems of a community. It is improbable that students will do what their professors do not do, or do without motivation, or do depreciatively; this situation gives rise to attitudes that are undesirable in the educational program.

In addition, professors also frequently transmit preconceived ideas about the qualification of service personnel in education. This implies the need for a commitment of medical schools in their communication with the service sector. Medical schools are responsible for planning continuing education programs, to maintain and keep professional skills up to date, to conserve service quality and professional qualifications, so that they can fill the educational needs delegated to them.

### Student Performance Assessment

Student performance assessment is another important point. Although professors are reluctant to accept the idea, the truth is that the assessment system, above all others, is a determining factor in learning. Procedures usually verify the memorizing capability of students. These also reflect the predominance of explanatory classes among teaching techniques, and the strong habit by students of studying notes from these classes. The underlying principle of this teaching practice is that if someone has the knowledge, he/she is capable of translating it into action, when needed. We must, nevertheless, differentiate between knowledge, competence (or the capacity of executing a task), and performance (or doing what is necessary). Competence and performance require more than just knowledge; they require the exercise of technical capabilities, and are influenced by attitudes and values acquired during education (9).

Thus, assessment procedures will be decisive in the promotion of professional competence and quality control of individuals who have gone through UNI project courses. It is a duty

of the professors to be present at this assessment function, or to use their tools to protect society from unprepared professionals. This can be accomplished with a careful selection of assessment tools and the observation of technical recommendations for their construction and use.

In summary, a qualitative leap will be required in the teaching/learning process for the evolution of health professional education. From an overvaluation of the teaching process - reflected in the binomium time/content - we must progress to the valuation of learning results - or outcome represented by the binomium competence/performance (10).

## From Theory to Practice

UNI projects are geared toward courses already in existence and are not designed to generate new ones. Thus, except for eventual planning of a parallel curriculum, adjustments will be introduced in current curricula, so that part of the activities are developed in a community.

This does not mean that this part of activities will be unknown, or underrated by the faculty, or that it will not be reflected in the rest of the curriculum. It does not merely imply sending students to basic health services or community activities, but is meant to incorporate the work developed in these settings into medical school objectives and strategies.

It will be up to each UNI project to decide about the sequence, continuity, and integration of curricular activities, to provide the entire course with comprehensiveness and coherence. Therefore, it is not expected that innovative activities be limited to a given moment in the curriculum, as would be the case, for example, with the implementation of a discipline dedicated to primary health care, or the inclusion of a rural internship.

As already mentioned, difficulties in the execution of these kind of projects are well known. Among them, the following stand out: lack of motivation by professors; antagonism between faculty and service personnel; specialized education of professors in contrast to general education expected from students; resistance to interdisciplinary work; lack of preparation of students for active learning.

Consequently, because of previous experiences to try and reduce risks of additional failures, UNI projects should consider, in detail, two points: professor participation and the administrative structure of courses.

Professor participation in the development of the pedagogic model of UNI projects is a key element. Participation cannot be restricted to those dedicated to collective health, because they do not have an explicit contract with the patient, or opposed by clinical doctors, who may have an interest in the community, but see their immediate responsibility as being with

a sick patient. The pedagogic model of these projects has an essentially clinical-epidemiological component that will have to attract an interdisciplinary group of competent professors who act as dynamic examples for students. How do we motivate them? What has to be done to have them develop and demonstrate attitudes of recognition for the value of preventive measures? How do we make them understand the medical schools' social commitment? What kind of incentives, relating to the faculty career (promotion, remuneration, etc.) should be applied?

In addition to undergraduate courses, professors should be attracted to the development of research projects and continuing education programs for service personnel.

The UNI project requires and extends the field for scientific research - indispensable for another responsibility of medical schools: post-graduate education. Similar to what happens in teaching, research activity is usually defined according to professor interest, at the leading edge of their disciplines, and is generally biomedical in nature. We expect a broader scope of this activity, with the inclusion of epidemiological and social aspects, interdisciplinary teamwork, preference for priority health problems, with a focus on participatory research, or with the involvement of the so-called beneficiaries (the community, in this case) and extending to research on health services.

The importance of continuing education activities, commitment of medical schools with the organization, and development of this phase of professional education has already been referred to in this document. To be relevant, these activities have to be closely tied to professional practice. Subjects that can be addressed by multi professional teams should also be explored as a way to assure that these activities pertain to the performance of daily work.

Finally, there is the problem of the administrative structure of graduation courses. One of the recommendations included in *The GPEP Report ("Physicians for the Twenty-First Century")* reads as follows:

"Medical school deans should identify and designate an interdisciplinary and interdepartmental organization of faculty members to formulate a coherent and comprehensive educational program for medical students and to select the instructional and evaluation methods to be used. Drawing on the faculty resources of all departments, this group should have the responsibility and the authority to plan, implement, and supervise an integrated program of general professional education. The educational plan should be subject to oversight and approval by the general faculty" (11).

There are those who consider this to be the main recommendation of the report, because without it none of the others are carried out.
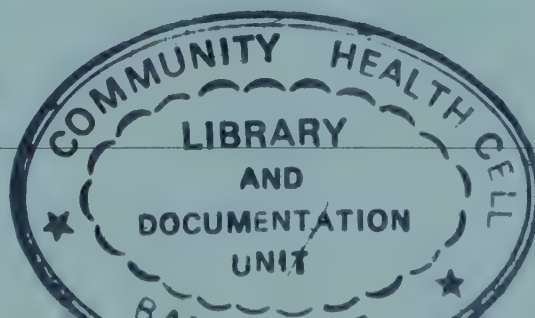
Undergraduate courses currently are being developed by isolated departments and disciplines without a view of overall student education, but instead with each department or discipline's own opinion of what the future professional should know (doing, in general, is not considered). The individual departments, or disciplines, shall perform their part in the global plan, but planning and coordinating the execution of the project should be among the responsibilities of a special, interdisciplinary organ made up of motivated, prepared professors who have time available for the task.

Coherence, comprehensiveness, and strengthening of general education in an undergraduate course are only attained if a mechanism of this kind is implemented to: overcome resistance by departments and their actions; avoid fragmentation of curricula into numerous disciplines corresponding to specialties; promote educational preparedness of professors; and obtain the dedication of professors to the graduation course. Until today, at least in medical schools, this is the least valued product by the majority of faculty members, who dedicate little time and effort to it. They reserve them, preferably, to postgraduate courses, research, and health care activities, according to their own personal interests.

## Bibliographic References

1. CHAVES, M. et al. Cambios en la educación médica. An·lisis de la integración docente-assistencial. FEPAFEM, Fondo Editorial, no. 3, 1984.
2. CHAVES, M.; ROSA, A.R. Org. Educação Médica nas Américas: o desafio dos anos 90, FEPAFEM/ABEM, Cortez Editors. São Paulo, 1990.
3. SPITZER, W.O. The Public's Health is too important to be left to Public health workers. Annals of Internal Medicine, 111(11): 939-42, 1989.
4. SPITZER, W.O. The Public's Health is too important to be left to Public health workers. Annals of Internal Medicine, 111(11): 939-42, 1989.
5. FRAGA, E. Residîncia em Clínica Médica. UFRJ. Hospital Universitário Clementino Fraga Filho, 1991, mimeograph.
6. CORREA, E.J.; CHOMPRE, R. 0 Atendimento á criança pela equipe de saúde. In: LEAO, E. et al. Pediatria ambulatorial. University Press, UFMG, Belo Horizonte, 1983.
7. TOSTESON, D.C. New pathways in general medical education. The New England Journal of Medicine, 322 (4): 234-8, 1990.
8. TYLER, R.W. Princípios básicos de currículo e ensino. Porto Alegre, Ed. Globo, 1974.
9. WORLD FEDERATION FOR MEDICAL EDUCATION. World Conference on Medical Education Report. Edinburgh, 1988.
10. CHAVES, M. Introdução. In: ABEM. Preparação do Médico Geral. Série Doc. da Assoc. Bras. Educ. Méd., no. 11, 1986.
11. ASSOCIATION OF AMERICAN MEDICAL COLLEGES. Physicians for the twenty-first century (The GPEP Report), 1984.

# Concepts and Strategies of Integration with Health Services Through the Development of Local Health Systems (SILOS)

Sebastião Loureiro

This chapter refers to basic literature about conceptual and organizational aspects of local health systems (SILOS), as well as possible strategies for their implementation.

We also try to define local health systems as the preferred strategy for integrating universities with health services and the community. We are aware of the different levels of institutional and organizational development among health services in the different Latin American countries that participate in the UNI Program. Still, SILOS represent a logical choice for implementing, refining, and assessing the integration process. This choice is justified by the fact that SILOS share many of the same assumptions and principles as the UNI Program itself.

Since the World Health Organization defined primary health care (PHC) as a prime strategy to attain the goal of "Health for All by the Year 2000," the organization model defined as the most appropriate to arrive at those objectives is the SILOS model.

Most countries have made efforts to obtain some experience in the area of SILOS. Usually, these experiences have taken place with university participation and cooperation, drawing on the experience of districts in which health schools were linked with the health system. Thus, SILOS organizational concepts and proposals have been part of the educational process at various universities.

A number of these experiences have been published by the Pan-American Health Organization, universities, or scientific publishers. Consequently, we have tried to choose literature that reflects, more precisely, conceptual bases for SILOS development, experiences of Latin American countries, and SILOS planning and assessment tools. We also have included some items on teaching/service integration strategies, and a glossary (Appendix 2) of the terminology most frequently used in literature on SILOS and situational strategic planning. The glossary is intended to foster understanding among professionals who have not yet been exposed to this new methodology. The bibliographic references include literature explaining this methodology.

Development of the concept of SILOS as the basic unit of a health system that addresses the health care needs of a given population, has coincided with the growing belief that health service is a right. Another part of this belief is that the state is obligated to assure conditions for the development of promotional, preventive, and recuperative health services, with the participation, of the individual, organized society, and the state itself.

Diverse experiences in different countries have shown the need to develop and strengthen SILOS as a strategy for change in national health systems. The World Health Organization and Pan American Health Organization have approved a series of resolutions to promote the exchange of experiences among countries, in addition to "promoting coordinated participation of all organisms related to health, whether service providers, human resource educators, researchers, or technical cooperation personnel."

## Conceptual Aspects

From a conceptual point of view, SILOS should be regarded as:
1. A process of reconstruction and reorientation of national health systems.
2. A space for integration of the health sector into the local and regional development process.
3. A strategy to reach greater coverage, efficiency, efficacy, and effectiveness of health actions.
4. A model of spatial organisation and hierarchical structure for the complexity of care and services.
5. A methodology applied to local health planning.
6. A policy to allow greater control by users of health services delivery systems through their organised participation.
7. A step toward the democratisation of health service through the decentralisation of power, release of resources, and the development of management skills at the local level.
8. A practice to be developed in the relationship between community and health services delivery personnel.
9. A scenario in which, at the private level, a series of conflicts of interests among different social participants (classes, strata, corporations, etc.) are expressed.

These points are developed in various official publications, as well as in academic studies. Sharper, more-strictly defined concepts for SILOS need to be established, however, because of the fact that health systems have been organised in many different ways at the local level, as circumstances dictate. Some of these different experiences do not fulfil the basic criteria for attaining various SILOS objectives. Consequently, the SILOS development process should be regarded as a way of changing the current models that exist within the day-to-day, reality of health services.

Most authors apply a series of criteria to define SILOS, such as: a defined geographical area (catchment area); the registered population; the physical network that has been based upon the complexity of resources and installations; the care provided, at least, at the primary and secondary levels; organized community participation; health actions that integrate promotion, prevention, and health rehabilitation levels.

For some, SILOS development also implies the use of strategic situational planning.

With regard to integration with universities, there has been little contribution. The need for permanent assessment and research - as essential features for SILOS improvement - creates the possibility of university participation in the SILOS implementation process. However, new lines of communication between the university and health services can be established in the following ways:
1. Continuing education for health professionals.
2. Reorganizing the collective health practices within a multiprofessional scope.
3. Communicating the public's knowledge about health/disease to the institutional intervention programs on health.
4. Furnishing service providers and the community with knowledge about health conditions and risks that the population may be exposed to, so that health plans can be put into place.

It is expected that the UNI Program will help broaden the possibilities for integrating health professions practice with services, and that it will draw on the entire potential of basic university functions: teaching, research, and continuing education.

UNI projects should also develop operational strategies that transform these still-abstract proposals into concrete health system practices that can change morbidity and mortality profiles of social groups and the community.

Thus, operational strategy should be oriented toward changing different practices in health care and toward matching university and health service goals to the needs of people in specific geographic areas.

## Operational Strategies

Correct conceptualization of SILOS is vital in establishing a proper operational strategy for their implementation. The steps of this operational process must be planned carefully to obtain the support of the most important players in this process of change. It should be clear that the SILOS proposal is not merely an administrative device, or a new kind of bureaucratic organization. SILOS are essentially a proposal for changing practices related to health: institutional practice, professional practice, and social practice.

We believe that "practice" - that is, the use of knowledge in different areas - can change a given reality through socially organized work. In the area of health practice, this may be a matter of changing certain prevention, promotion, and health recovery techniques. It may also be a process of reorganizing institutional power, or changing the way organized community participation is expressed, with a view toward improving community health conditions and the quality of life.

Aware that limitations exist within most structures, SILOS would set the stage for the establishment of a circle of social-force alliances that would encourage change in the social practice of health care.

### *SILOS and the Need for Change in Institutional Practice*
Operational strategy directed at encouraging change in health sector institutional practice is related to resource decentralization to the local level. For this strategy to succeed, however, certain intermediate steps are necessary because of legal and administrative statutes, strengthening of management skills at the local level, development of human and technical resources, and functions. In this process of institutional change, it is essential that legal guidelines be established to allow: a) effective, organized community participation in entities with deliberative power; and b) the inclusion of evaluation processes with quantitative and qualitative methods, in the search for indicators of effectiveness.

It is important to remember that decentralization is a power redistribution process, and, as such, it is a political process in which political and economic interests tend to conflict.

### *SILOS and Professional Practice*
SILOS are also privileged territory for marked changes in health sector professional practice. Health professionals - as a result of the neoliberal economic development model and ideology necessary to maintain their predominance - have been progressively adapting to a series of changes in the health sector.

These changes have affected health profession practices in the following ways:
• An increasing number of salaried health personnel.
• The use of advanced technology in diagnosis and treatment.
• The strengthening of collective interests.
• Loss of reference to the social function of the health sector.
• Individualized care.
• An increasing restriction in the scope of practice.
• A double standard of reference between public and private.
• Distancing between the execution of planning, management, and health actions.
• Lack of up-to-date knowledge about tools of the trade.

Surely other items could be added to this list. Nevertheless, difficulties and challenges remain in seeking substantive changes in professional practice to strengthen and develop local health systems. First, one must reach a consensus, even if temporary, about the question of multiprofessionalism in the health sector. Which actions should be considered as knowledge of processes and techniques that can be, and should be, appropriate for any health professional? What knowledge of processes and techniques are specific to a profession, with regard to its historical development and cultural aspects in the societies where these professionals live?

For the process of change to begin, it is fundamental that discussion takes place and consensus be reached on the subject of health profession ethics. As long as it is impossible to generate a movement that places the ethical question of work in the public health sector within the proper scope of health professionals' rights and obligations, it is difficult to change professional practice. It is possible to obtain improved technical qualifications of these professionals, but this will not be enough to effect considerable change in their practices.

Another process necessary in changing health professional practice is the search for theoretical/conceptual and technical/operational knowledge to bring about intervention and foster change. This requires a previous definition of a paradigm or theoretical conceptual target that expands the scope of practice. This target could include specific care of individuals, families, population groups with differentiated risks, the community, and the environment.

It would also be necessary to specify actions that could be recommended to each level of health care (promotion, prevention, and recovery); for each object of action (individual, family, community, environment); and by specific professional competence: medicine, nursing, nutrition, dentistry, pharmacy, sanitary engineering. The construction of this tridimensional matrix could clear up important questions in multiprofessionalism and in changes in the practices of health professionals.

### SILOS as a Field for Social Practice
The development of SILOS sets the stage for change in social practices regarding health. This means accepting a broader concept of health, as well as an understanding of broader processes of social change and the limits of sectoral transformations.

Operational strategy for transforming SILOS activities into social practice falls under two domains: culture and politics.

A successful strategy in the cultural domain means knowing the material conditions and social processes that differentiate social groups in risks and possibilities of health, disease, or death. This knowledge is disguised by different perceptions and beliefs that, on one hand, are held by the community in its culture of resistance and, on the other, by health professionals with their culture of domination (scientific superiority) and institutional culture. Social practice oriented toward change will have to undo this ideological disguise by trying, in the process of community participation, to break the process that places health professionals and the community at opposite ends of the power spectrum. If social practice is to help change the health situation, popular knowledge about disease and cure and the relationship of health with actual ways of living must be considered and valued. This appreciation is also fundamental if the health services sector is to correctly identify population needs.

Still, in the cultural scope, it is necessary to demystify knowledge and scientific practice so that they are not used as elements in the exercise of power. Social relations, whether between health professionals and individuals, families, or the community, should not be influenced by rituals that strengthen dependence on the one side and domination on the other. If that occurs, the opportunity to establish communication that leads to more efficient joint action is once again lost.

In the political domain, social practice has to do with organized community participation at different levels and occasions when health activities take place. Criticism about models of consenting participation are well known and actually represent a delay in the process of change. The participation aimed for in UNI projects is based on the citizens' right to participate in social processes that affect them. From this point of view, the role of the state and its employees also must be considered in the provision of services, and resources must be derived from work that is done in the social domain. Thus, participation should cover all instances of institutional action that could have some repercussion on the health of the community, whether at the health center, hospital, regional, or district office level.

## Methodology and Organization

The Department of Organization of Health Units of the Brazilian Unified Health System of the Ministry of Health called a large meeting, attended by researchers and technicians, to produce a document on the conceptualization, foundations, guidelines, and strategies for the implementation of "Health Care Models in the Unified Health System." We are drawing from a summary from the discussions - including many concepts and definition - to provide assistance in the establishment of a common language regarding SILOS.

The construction of SILOS is a task that implies processes of a different nature (political, standardization, managerial, organizational, and operational), whose orientation should be directed at reaching the following objectives, within health systems:
- To obtain the highest possible impact on the principal health problems of the population, with a view toward improving its state of health.
- To arrive at universality in the delivery of health care, with equitable conditions for different social groups.
- To offer comprehensive health services, with utmost efficiency and efficacy, from the economic perspective to the social and political.
- To strengthen decentralized and participatory management of the unified health system at the local level, with a view toward democratization and social control of health service production and consumption.

Because of the multiplicity of terms, definitions, and concepts in the organization of health services, as a strategy, we have chosen those that reflect basic principles in outlining a local health system, such as those that follow.

## Access

The concept of "access" refers to the actual possibility that a group of resources, techniques, and practices will be consumed in the form of health services.

Universality and ease of access is facilitated by a series of physical, political, and administrative factors, among which the following stand out:

- The existence of a hierarchical and regionalized network of health units of different levels of complexity, equipped with adequate technology and resources to provide health problem-solving. These should be located close to places of work, or residences.
- Streamlining of administrative procedures, facilitating the coverage of demands by users as quickly and satisfactorily as possible. This is essential to avoid deterioration in the relationship between personnel and users, which can reflect on service quality standards.
- Availability of services in shifts that are compatible with maximum utilization by users.
- An effective communication system to inform the population about existing services and procedures for their use.
- An organizational system based on referral and back-referral principles, to be standardized with precision and clarity, and operated in a way that makes the efficient flow of users viable within the different health system levels.

## Territoriality

Territoriality refers to more than a defined geodemographic base; it refers to a particular dimension or setting: the realm of citizens' political and social constructions.

The territorial base implies the link of the population with a health infrastructure and a set of equipment within the SILOS perspective. This link includes a system of registered clientele, whose operational pattern (the physician, team, etc.) will depend on specific local features. The concept of clientele registration implies that the professional team will take responsibility for the health of the clientele, independent of the hierarchical level of care where specific treatment takes place.

The first aspect of SILOS organization is its territorial and population base. Accordingly, fundamental criteria to consider are:

- The demographic, socioeconomic, and political-cultural characteristics of a given population.
- The territorial and political-administrative limits of where the population is located.
- The epidemiological and sanitary characteristics that cover the existing health service network configuration.

## Comprehensiveness

Comprehensiveness is considered one of the most important principles in the model of care. It can assure individuals of their right to health care - from simple levels to the more

complex, from curative to preventive - and can assure an understanding of individuals and communities.

The principle of comprehensiveness is projected through an organized system of care - in a hierarchical and decentralized manner - with formal referral and back-referral systems, where the integration of infrastructure resources is assured.

### Regionalization

Conventionally, the concept of regionalization has to do with the division of geographic space, usually managed by the state level of health services. When adding the notion of functionality and governability of the system - matched to complex technology and complementary service - the classic concept of regionalization no longer fits. SILOS constitute the basic unit of the system, involving technical, as well as political and administrative investment. In the SILOS scenario, various forces for self-management, control, and popular participation meet to design new modes of care.

### Hierarchical Organization

Hierarchical organization represents a system of service that sets principles of universality, equity, and comprehensiveness. Consequently, the service network within a self-managed, unified health system should be capable of offering all kinds of assistance, as well as access to all types of available technology.

Hierarchical organization, besides assuring the principles mentioned above, should train health district professionals for a comprehensive approach to the user and/or community, so that actions and activities - such as epidemiological, health surveillance, control of endemic diseases, sanitation, labor health control, and environmental protection - are provided in a biological and social sense.

### Complementarity

Knowledge and discussion of strategies used in relation to a "complementarity" organizational method are essential; the assurance of the comprehensiveness of actions depends on the application of this principle. Whether in the public or private sector (philanthropic and lucrative) or in public subsectors (federal, state, and municipal) complementarity always exists, basically differentiated by its formal or informal, more or less socialized character.

### Health Problem-Solving Capacity ("Resolubilidade" in Portuguese)

The concept of "resolubilidade" is related to health service capability of providing satisfactory answers to individual or collective health problems. Thus, it can be unfolded in two levels:

- Medical practice "state of the art," in which all knowledge and necessary medical equipment are included for the diagnostic and treatment process, to achieve a cure for

a specific pathology. The degree of resolution in this case would be related to the logic of the existing resources. The classic examples are chronic-degenerative diseases. The currently available therapeutic arsenal allows for "resolubilidade" up to the limit of the "state of art."

- Health services, associated with the technological composition of existing resources (human, equipment, etc.) and the degree of complexity of health problems to be resolved. The association of the hierarchical organization concept is implicit here.

The concept of "resolubilidade" should not be confused with that of quality or effectiveness that have to do with results from service delivery. There are services with good problem-solving capacity that are nonetheless ineffective and of low quality. Henceforth, the notions of quality, effectiveness, and impact should constitute, along with "resolubilidade" the basis for an evaluation system.

## *Decentralization*

Effective decentralization of health actions should materialize according to actual possibilities. It should, however, cover technical aspects, as well as political-administrative factors, with the transfer of resources and decision-making capability to the peripheral health system levels; this implies, among other things, the organization of budgetary units and health care services.

The strategic directive for continuity and extension of the decentralization process currently has the essential element of municipalization, which requires the recovery of municipal autonomy. This is seen as the capability by the municipality to manage (plan, follow up, supervise, and assess) its human resources and infrastructure (physical and financial), as well as service network decentralization, which is currently being performed in a fragmented manner.

## *Democratization*

Health system democratization assumes the effective opening of channels for community participation in the formulation, follow-up, and assessment of health policy and planning, as well as in political-administrative management of the sector at all levels. This also means involving the organized population in the reorientation of the model of care and in the control of actions performed.

The inclusion of health worker representatives and popular organizations in social participation for SILOS management should be of a decision-making nature, with the intent of forming a new health awareness. This new awareness includes the understanding of the social character of the health-disease process and the political nature of management practice and health service delivery.

Social participation is related to different social forces that influence formulation, execution, supervision, and evaluation of social area policy (health, education, housing, transportation, etc.).

*Financing*
One of the main problems in health service decentralization and/or municipalization is in the way resources are transferred for expenses as well as for local investment.

Financial goals based only on installed capacity and current human resources maintain the actual model of care that places priority in medical care, the expansion of private services, and makes the establishment of new ways to intervene in epidemiological reality impossible.

## SILOS and Local Health Planning and Programming

To use the SILOS development process as a strategy for integrating university and health services, local health planning and programming methods must be applied. The settings for integrated action of the three UNI Program components - university, services, and community - are defined at the local health planning and programming levels, and, in addition, in the four phases of the situational planning process:

- Explanatory phase, or the identification of the health situation, which goes beyond health diagnosis. To accomplish this, we must include an analysis of elements that structure the health situation with system rules, social clusters, and the changing of facts, or social fluctuations. The situational explanation should refer to general determinations, specific conditioning factors, and exceptional conditioning factors.
- Normative phase, or the definition of proposed plan content or affirmation of what must be performed. It also defines strategies to be applied, participants, the projection of operations and actions, and the operational levels of the plan. During this phase, one must also attempt to establish program orientation that considers different scenarios.
- Strategic phase, which relates to the confrontation and articulation between planning proposals (what should be) and the political, institutional, and economic constraints. This phase involves the analysis of power and interest forces to maintain the status-quo, or change it, through political, economic, institutional, and organizational feasibility studies. For the UNI Program, this should be the time to attempt integration between the different faculties, and between them and the different health system levels, to achieve program institutional and organizational feasibility.
- Tactical-operational phase, or definition of priorities at the level of processes and operations and of the role of different participants in the process. In the UNI Program, different tasks and responsibilities should be attributed to universities, services, and the community in launching the plan, (which was defined comprehensively). Joint action by the different participants on bottlenecks and entanglements of health problems identified during the explanatory phase, should also be assessed to determine the impact in promoting change. The assessment should include a comparison of scenarios projected during the normative phase (what should be) with results reached after launching of the program - that is, the result of actual actions undertaken by program components. Strategic planning has been considered as most appropriate for the local

programming process of health systems, and the implementation of its phases. That strategic planning has the following aims:

1. To define the health needs of a specific population cluster.
2. To contract available and potential resources according to defined needs.
3. To establish priority program goals.
4. To formulate administrative actions needed to attain program goals.
5. To evaluate results obtained.

Given the objectives of the UNI Program - to integrate the efforts of universities, health services, and communities - strategic planning serves as a way of articulating program objectives so that their implementation is institutionally feasible.

## Suggested Literature

1. ALARID, H.J. "Bases para la programación en los sistemas locales de salud." IN: Paganini, J.M. and Mir, R.C. eds. pg. 314-20, PAHO, Washington, D.C. 1990.
2. CAMPOAMOR, N.R. "Contribuición al análisis situacional a la programación de los sistemas locales de salud." In: Paganini, J.M. and Mir, R.C. eds. pg. 321-32, PAHO, Washington, D.C. 1990.
3. CASTELLANOS, P.L. "La epidemiologia y la organización de los sistemas de salud." IN: Paganini, J.M. and Mir, R.C. "Los sistemas locales de salud." pg. 212-199 PAHO, Washington, D.C. 1990.
4. KLECZKWOSKI, B. & ROEMER, M.I. "Sistemas nacionales de salud y su reorientación hacia la salud para todos." Cuadernos de Salud Pública, no. 77, WHO, Geneva, 1984.
5. LEWIS, C. et al. "El sistema de información en los SILOS - propuestas para su desarrollo." In: Paganini, J.M. and Mir, R.C., pg. 220-40, PAHO, Washington, D.C. 1990.
6. LOYOLA, L. "Aspectos generales de la programación local." In: Paganini, J.M. and Mir, R.C. "Los sistemas locales de salud - conceptos, métodos, experiencias." Scientific Publication 519, pg. 333-48,. Washington, D.C. 1990.
7. MENDES, E.V. "Importancia de los sistemas locales de salud en la transformación de los sistemas nacionales de salud." In: Paganini, J.M. and Mir, R.C. eds. pg. 21-279, PAHO, Washington, D.C. 1990.
8. MINISTRIO DA SAUDE - SESUS - "Modelos assistenciais no sistema único de saude." Brasilia, 1990.
9. NOVAES, H.M. Comprehensive actions in local health systems. Conceptual analysis and appreciation of selected programs in Latin America. Technical Publication no. 31, PAHO, Washington, D.C. 1990.
10. OREGON, S. & MONTILVA, L. "La planificación situacional en los sistemas locales de salud." In: Paganini, J.M. and Mir, R.C. "Los sistemas locales de salud - conceptos, métodos, experiencias." Publicación Científica, 519, pg. 349-406.
11. PAN AMERICAN HEALTH ORGANIZATION. "Desarrollo y fortalecimiento de los sistemas locales de salud." Washington, D.C. 1989.

12.PAN AMERICAN HEALTH ORGANIZATION. "Desarrollo y fortalecimiento de los sistemas locales de salud - La participación social." Washington, D.C. 1990. HSD/SILOS-3.

13.PAN AMERICAN HEALTH ORGANIZATION. "Desarrollo y fortalecimiento de los sistemas locales de salud - La participación social - Estudios de caso." Washington, D.C. November 1990. HSD/SILOS-7.

14.PAN AMERICAN HEALTH ORGANIZATION. "Desarrollo y fortalecimiento de los sistemas locales de salud - El processo de autoevaluación de un sistema local." Washington, D.C. March, 1990. Health Services Development Series 78.

15.PAGANINI, J.M. "Sistemas locales de salud: un nuevo modelo de atención en los sistemas locales de salud." Eds. Paganini, J.M. and Mir, R.C. pg. 50-58, PAHO, Washington, D.C. 1990.

16.PAGANINI, J.M. "Programación en los sistemas locales de salud." In: Paganini, J.M. and Mir, R.C. eds. pg. 303-13, PAHO, Washington, D.C. 1990.

17.PAIM, J.S. & TEIXEIRA, M.G.C.L. "Os programas especiais e o novo modelo assistencial." Cadernos de Saúde Pública, R.J. 6 (3): 264-77, July/Sept. 1990.

18.TEIXEIRA, C.F. "Planejamento e programação local de saúde em SILOS - metodologia e organização." DMP/UFBA, 1990. Mimeographed document.

# The Community as an Essential Component of UNI Projects

Jorge Izquierdo

The community is an essential component of the UNI Program. Chapter 1 pointed out that the program, when completed, will have created:
- Models of community participation in health-related decisions.
- Models for working in the community through multiprofessional teams.

With that in mind, the various projects must approach the community in comprehensive, dynamic, and creative ways, with no restrictions beyond those imposed by local conditions. To that end, this chapter lays out the basic concepts of the community approach.

We will analyze four points. The first covers conceptual aspects of the community approach. The next two points discuss the implications of that approach in academic and service models. The final point looks at what this approach means to the community itself.

Some basic examples highlight each of these points. In some cases, examples come from the experiences of Latin American universities.

## Community Approach

Often, there is some confusion about what the "community" component means. Each person brings a different perspective or preference to the concept. Lack of clarity can result in new and unnecessary mistakes.

So that UNI projects will not run the risk of this confusion, we offer two useful considerations. The first involves the distinction between institutions (i.e. the university and service organizations) and the community, as explained in Chapter II. In this case, the community is one of the settings in which the projects develop; the university is another.

Chapter 2 also offers some helpful figures in the sections about requirements, expected results, and establishing a framework for UNI projects. Table 1 shows the relationship between selection criteria, expected results, and participating institutions, and Figure 2 offers a means to easily identify the settings involved.

The second consideration involves the dual nature of the community: it is both the object of change and the agent of change, all in the same project. This duality can result in confusion and conflict. We will analyze each of these aspects because of their significance for the UNI Program.

The community is a very important concept. The population within the setting of each UNI

project is the main object of change and study; this implies that community improvement, in both objective and subjective terms, is the measure of success for UNI projects.

In practice, each community will differ from one project to the next, according to its demographics, location, economics, culture, and other factors. Populations may vary between those who have a district (or its equivalent), or perhaps a region, as its larger boundary, and those who have a neighborhood or local community as their smaller boundary. Typically, a "community" will most likely be a group of local communities that do not cover an entire district.

Most important to understanding the community is that, while defining the UNI Program's direction, each brings its own theoretical, methodological, technical, and operational challenges that require creative responses. We will address this later in the chapter.

The community as an agent of change is best addressed through this question: Who can we motivate, mobilize, train, and support to participate in local health programs? The answer is elementary: as many members of the community as possible. But while simple, organizations and communities must put forth effort to make it happen.

An example of how this is done is found in municipalities. This is a special case because a municipality involves a link between neighborhood committees and a formal state organization. Therefore, it is an entity that should always be considered, in spite of the partisan conflicts that are often part of a municipality's problems.

A second example involves community organizations. Generally, they fall into two categories: territorial and functional.

Territorial organizations are essentially political in nature; do not confuse them with partisan political groups, although the latter often try to influence them. The most common territorial organization is the community council, usually elected or nominated by the public. Usually, the council formally represents the community, particularly to the state.

Functional organizations are established to respond to a specific need of the population, but they don not hold official representation. This is the most common type of community organization in most Latin American countries. Functional organizations encompass different groups - mothers' clubs, popular eating places, health promoters, milk distribution committees, athletic organizations, children's rights defense groups, religious groups, youth or womens' organizations, and many others.

A third example of how people become involved in local health programs is through formal institutions that have gained popular acceptance. This includes schools, health centers, and religious organizations. The first two are important tools that should be mobilized and

supported with a view toward constant improvement. They usually have motivated staffs, although sometimes the workers are frustrated and burned out - conditions made worse by recent financial crises (1, 2). Religious organizations also are an important source of support, given the religious tradition in most Latin American countries.

Our last example involves a type of organization that is not of a state or community nature, but is frequently found in communities. These are the so-called non-governmental organizations (NGOs). In a recent publication, Lavandez (3) discussed these organizations, relating them to SILOS. Note that, although they don not belong directly to the communities themselves, NGOs are a form of civil society that has grown extensively in Latin America over the last 20 years. Many NGOs perform community health operations, making them a helpful tool in creating a cooperative atmosphere.

With a broader understanding of the term "community," it becomes easier and more effective to pursue the UNI Program community approach:

"We reaffirm that health is a basic human right; and that, in accordance with this, it is necessary to work on proposals that allow the realization of this right in defined community clusters, providing maximum comprehensive care to the population in these clusters to attain improved health levels in the scope of promoting comprehensive community development. To accomplish this, it is necessary to foster the most extensive synergy possible of all internal and external forces of the community, motivating, training, supporting, and thus strengthening basic organizations, whether territorial or functional, as well as stimulating the development of leadership with a view to resolving the needs of the population; generating an attitude of increased responsibility in individual and collective self-care; with a maximum use of resources from governmental and non-governmental institutions, that operate in this context; and is the duty of the university to become involved creatively in this process, empowering to the utmost everything that is in its reach."

## Implications of the Community Approach on Service Models

Chapter 4 contains an extensive revision of the service model proposal used as the starting point for UNI project discussion. It includes the essential elements of the SILOS proposal - concepts, operational strategy, methodology, and organization, as well as general guidelines for local health programming.

SILOS are defined as follows:
"A setting of intercorrelated health resources, organized by geographical-population criteria, in urban and rural areas, projected according to population needs, defined in terms of risks, and assuming the responsibility for the care of individuals, families, social groups, and the environment, with the capability to coordinate available resources, sectoral or extra-sectoral, facilitate social participation, and contribute to the

development of the national health system, which it vitalizes and to which it provides new orientation" (4).

This is an ambitious proposal for radical change; it seeks to decentralize health services and address the needs and concerns of the population. However, its implementation implies a complex political and technical process.

Niremberg and Perrone (5) make this suggestion:
"Change that should be obtained through decentralization processes is a more streamlined and opportune organizational modality in health service management and delivery, immediate, without interference, where actions take place, and as close as possible to the source of problems. These changes assume a form of government and conduct that enjoys more self-determination to deliver services and solve problems at the local level, as well as a mechanism that channels legitimate and joint participation by personnel, politicians, health workers, and citizens. Its objective is to arrive at efficiency, transparency, and disbureaucratization of health systems and services, and to facilitate direct participation by individuals in management."

In this light, we can predict at least one difficulty: the long tradition of monopoly of knowledge by health-service personnel, especially at the professional level. An attitude of deep self-criticism is necessary for them to become open and supportive of the population's rights and potential to become more involved. Unfortunately, experience shows that not all health-services personnel are ready to accept what is proposed by the attractive SILOS rhetoric.

The above authors explain further:
"(...) participation creates political conflicts because it implies the distribution of power; in addition, it has repercussions in basic organizations, strengthening its political-organizational profiles, and it is probably not limited to the health field, but overlaps with other social areas."

Typically, community members are not involved in the establishment or operation of service activities. Instead, their role is one of service "recipient" and has been incorporated into the process as a passive one. Under the current system, the possibility that they will participate in the health care system as decision-makers is becoming increasingly remote. A variety of roadblocks hinder their involvement, including the distance between community residents and those who provide health education and services or those who make the decisions. In most cases, active, substantive, and informed participation by the community does not exist - not in management, administration, or health-activity assessment. We must point out that this situation exists even when a community bands together to provide health services from the ground up, when no previous health care facility or equipment existed. For instance, similar situations have been noted in communities where

private organizations and individual citizens contributed the necessary money and labor to begin a health care facility or service. What typically happens is the community creates the basic infrastructure and then gives it to the state for administration and development. The hope is that the state will then facilitate a formal health care system for the community. What happens, however, is that the community becomes a passive entity and is called upon to "participate" - for a vaccination campaign, or food distribution, or some other secondary tasks - when the system's decision makers deem it necessary. Those decision makers usually are located far away.

Another cumbersome aspect in linking the health system to the community is the increasingly complex technical and scientific resources used in health care. This hurdle remains even when these supply and equipment resources are more closely tied to the profit interests of industries rather than to the needs of the population. This has caused some useful, low-cost health-care activities to be discontinued. Integrating health systems with genuine community participation will bring about a re-evaluation of these resources (6).

This integration requires all service participants to be adaptable, seek political and administrative support, and allow for technical and administrative flexibility. Most importantly, they must commit to assist professional and technical people who support the community approach and care about community participation. This means that service personnel should:
a) Pursue a horizontal relationship with the community or its leaders, especially in coordination and co-management.
b) Transfer knowledge and capabilities to citizens (e.g. health promoters, mothers, etc.) to foster the self-care approach, either individual or collective.
c) Meet with citizens and leaders of the community. These meetings are usually held in the community at unconventional times for the health sector - at night, or on weekends, when citizens are not working.

Just as important are the technical implications of the community approach. These must involve answers to basic requirements while holding to the principle of health as a right for all. We will only mention three of these implications:
1. The need to consider collective epidemiological and individual clinical aspects when planning local health systems (7). While the application of the risk approach in health care is often discussed, educational and service institutions typically do not use this valuable tool. This obstructs the assurance of basic care to all of the population, as well as specialized intervention in higher-risk cases. Information on the community for epidemiological studies can be obtained through a census or through simple surveys, with technical support from service institutions or universities.
2. The need to consider programmed care and spontaneous demand. When there is no epidemiological approach to community health care - in concert with detailed programming based on complexity and risk - people are forced to seek health services

only when they become ill. Be aware that this situation perpetuates. It costs service personnel the opportunity to project, execute, and assess health programs with broad and effective coverage. Without local epidemiological data, the situation also causes difficulty in distributing time and resources in a rational way.

3. The need to underscore the family as the basic community organizational unit - the natural liaison between the individual and the community. There are many Latin American experiences in which families were involved as a unit but not utilized correctly by educational and service institutions.

The choice of an alternative from among these and other options largely determines the profile of each project.

## Implications of the Community Approach on Academic Models

Chapter 3 contains a revision of educational and strategic priorities, as well as a discussion about the theory-practice relationship, that aid analysis of the UNI academic model. In view of this analysis, we offer some reflections on the application of the community approach.

Professional health education in most Latin American countries emphasizes individual, rather than community, care; it focuses on disease instead of health. It takes place in classrooms and laboratories, culminating in hospitals, usually highlighting the health problems affecting the population.

This model is highly valued. It is rooted in clinical practice and rehabilitation. Support for it is very high, probably due to the resulting social prestige and, in some professions - especially medicine and dentistry - financial benefits. By contrast, there is little attention to community work. Technical and scientific excellence in academic environments is measured mainly by performance in hospital clinical practice and, indirectly, by the financial revenue of professionals.

Meeting the program's objectives will affect the academic model because the relationship between teaching, service, and community organizations will be strengthened, and community practice will advance the theory. This should bolster community development by involving universities.

New guidelines will emerge that, in the long-term, indicate a change in values. Through the synergy of science and human solidarity, health professional education will uphold the principle of health care as a right for all; the result will be improved health across the population. This is the antithesis of purely scientific thinking and the attitude that health care is a commodity.

This approach implies a series of new commitments:

- Reassessment of curricula in different health care graduate courses so as to identify possible solutions to priority problems in the community.
- Allocation of credit hours similar to those of clinical subjects in community work studies.
- Additional credit hours for community work activities related to clinical disciplines, identifying complementary functions based on priority and risk criteria.
- Additional credit hours for community work itself. This opens the door for the institution, which is indispensable to dynamic community life and development.

It is vital to identify the best professors to teach in community experiences. They must be willing to dedicate prime-time to this task, which implies a willingness to become part of collective learning, solidarity, mutual exchange, and self-criticism. It also implies a commitment to the following:

- To identify common technical aspects of health professions in a community work approach, trying to marry the aspects of theory and practice.
- To organize multiprofessional teams that are responsible for conducting projects in various settings.
- To work with community and service representatives on local activity planning.

In addition, it implies a desire to foster cooperative involvement by professors and students of various professions. Multiprofessional work should not be merely the sum of activities performed in each discipline or course; their actions in the community must be coherent.

Finally, such an approach means promoting ongoing discussion among different participants about the developing operation. They must freely discuss advances, limitations, confluence, and conflicts so as to maintain the profile of the collective experience. In other words, this approach stems from a real development effort of ad hoc academic and administrative groups; in turn, this effort fosters trans-university organizational changes that bring about curriculum revision, a working methodology, and relations with the community and service institutions.

In Chapter 3, there is a discussion on student performance evaluation. Since this type of evaluation is superior to traditional knowledge measurements, new criteria and techniques will be needed whenever aspects of community service performance, teamwork, care by levels, individual and collective output, attitude about the population, initiative, creativity, and such are included.

Obviously, favorable conditions are needed to develop community work. These include providing faculty with transportation to the community; furnishing support systems at the university and service institutions; implementing computer support for keeping records and giving feedback; and providing the materials needed to develop preventive, promotional, and health care activities.

## Significance of the UNI Program for the Community

First, we must remember that most communities in Latin America are made up of groups of individuals organized to find solutions to their problems. These organizations operate without direct dependency on the state, university, or non-governmental institutions, although occasionally they may receive some support. Thus, they are, to a degree, protagonists of their own construction process as a community.

Predictably, communities support UNI projects that respect their requests, style, and rate of progress; support actual tasks or community development; include or, if possible, share problems that affect them, usually related to urban living or rural needs (e.g. land property deeds, housing construction, power installation, and water supply); implement or improve the health and education infrastructure; or create jobs. This type of project will have total support from the community; it will hail the project and seek the university's aid whenever a new community problem arises. In other words, the community will feel that it has a reliable ally.

On the other hand, if UNI projects concentrate solely on achieving curriculum objectives, using the community as a mere teaching tool without considering its needs - the men, women, and children who suffer daily in poor living conditions - the community will reject or ignore the project.

Frequently, the behavior of professors who arrive in the community is heterogeneous; they may deliver care only from obligation, with an arrogant or indifferent attitude, or they may be enthusiastic, interested in serving and promoting communication and interchange. These attitudes are evident to the community and can build or weaken the image of the UNI project.

Therefore, we are not dealing with a set sequence of events from which we can expect predetermined results. We are dealing with a dynamic process whose profile, speed, and results will depend on many factors. These include the features and stability of the community organization and its leadership; the social and financial situation of the country; state policy on poor communities; and the attitudes of university members and services participating in the project.

We must also remember that women's organizations are appearing that take care of different tasks in the community - health care, nourishment, financial aid, and participation in community organizational tasks, all in addition to their own family obligations (8). Because of their permanent presence in the community and their solidarity, these organizations are fundamental to developing projects that require direct and widespread action by the population. If UNI projects promote the return of the women's role in community development, supporting them with activities for their personal and group

growth, not limiting them to the transfer of technical capabilities that benefit third parties, they will be received by organized women in the community as an important reinforcement to their work.

It should be noted that some individuals are interested in contributing to community development with the potential of performing specific functions - frequently, with aspirations not satisfied in formal education. For example, this may be the case with midwives who could not become obstetricians, health promoters who could not become nurses, and instructors of illiterate individuals who could not become educators. For these people, UNI projects should provide training that, to a degree, meets their personal development expectations and strengthens their participation in community activities. This type of support directly fortifies the social weave of basic communities. This will continue even after the project is completed because these individuals will probably continue to act for the benefit of their families and neighbors, maintaining the continuity of the project.

## Bibliographic References

1. TAREA. Impacto de la crisis en la educación y alternativas de respuesta. Publicaciones Educativas Tarea-Tinkuy; Lima-Peru, 1989.
2. ANSION, J., DEL CASTILLO, D., PIQUERAS, M. & ZEGARRA, I. La Escuela en tiempos de guerra. CEAP; TAREA; IPEDH; editors; Lima-Peru, 1992.
3. LAVADENZ, F. Las organizaciones no gubernamentales y los sistemas locales de salud. Bol. Of. San. Panam. 109: 512-20, 1990.
4. PAHO. El desarrollo y fortalecimiento de los sistemas locales de salud en la transformación de los sistemas nacionales de salud. Document CD33/14; 1988.
5. NIREMBERG, O. & PERRONE, N. Organización y gestión participativa en los sistemas locales de salud. Bol. Of. San. Panam. 109:474-87, 1990.
6. MEDINA, E. La medicina tradicional o popular y la medicina oficial o moderna. Consideraciones sobre su eventual integración. Enfoques At. Prim. 3:11-22, 1988.
7. CASTELLANOS, P.L. La epidemiologia y la organización de los sistemas de salud. In: Los sistemas locales de salud; Paganini, J.M. and MIR, R. C., eds.; pp. 212-19, PAHO, Washington D.C., 1990.
8. BARTRA, F. La mujer, nuevo sujeto social: Un reto para la educación. Rev. Educación (Catholic University of Peru) 1:95-106, 1992.

# The Multiprofessional Team

Mario Chaves and Marcos Kisil

This chapter deals with the multiprofessional team, covering teamwork in SILOS as well as teaching-learning as a team.

In UNI programs, multiprofessional education does not mean the teaching of various health professions in one SILOS, each performing their work separately on different days and times. It does, however, entail examining the models, through which a creative process of complementary work method development and teaching-learning in a multiprofessional team takes place in UNI projects.

There is not just one health team; there are several. Each part of the health system has its own multiprofessional teams based on how specialized the tasks are. This is the case in tertiary level hospitals (intensive care units, for example) and even at the quaternary level (e.g., ophthalmology and oncology hospitals). In UNI programs, attention focuses on primary and secondary levels.

In approaching this subject, we need to integrate concepts discussed in previous chapters. The concept of the primary level health team, which receives the main attention of UNI projects, has its own characteristics because it involves working with the community.

## Types of Teams

There are two types of teams:
- Vertical teams are based on the duties of occupations at different educational levels. Examples are found in nursing, which includes professional, technical, and auxiliary levels. The idea of supervision is fundamental here.
- Horizontal teams are made up of different professionals, such as physicians, nurses and nutritionists, and even by peers of the same profession - clinical doctors, pediatricians, and gynecologists-obstetricians. Here the relationships are bound by complementary functions. In an era of specialization, we also identify the general practitioner-specialist relationship as horizontal. It occurs between professionals at the primary and secondary levels of the health-care system. Proper functioning of this relationship is essential for systematic health problem-solving through the creation and refinement of referrals and back-referrals.

We must not forget that the principal aim of teamwork is to increase efficiency and effectiveness of work in each level of the system and improve the problem-solving capacity of the system as a whole.

## Multiprofessional Teams in UNI Projects

Apply these concepts to the multiprofessional team in UNI projects. First of all, the team should not be artificial, since one of the project's expectations is participation in the development of an efficient and effective SILOS. To avoid being artificial, teamwork should be the daily routine in a health service.

Implementation of teamwork should precede teaching-learning in a multiprofessional team, or occur simultaneously. Just as pedagogy teaches the importance of professors as role models in training general clinical doctors or general practitioners, a health unit operating comprehensively on the basis of multiprofessional teams represents the best setting for teaching teamwork.

Also, we are not talking about choosing between uni-professional (individual) work and multiprofessional teamwork within SILOS. What will govern the distribution of time between uni-professional and multiprofessional work is the rational organization of work and the division of labor, seeking efficiency and effectiveness. The larger objective is attained when small teams inside a health unit relate to each other, forming one large team directed to community health needs.

## Competence and Performance

The concept of teaching based on competencies and performance is essential for UNI projects in its two settings: the university and the community. A closer link among health professions should begin in the university setting, whenever possible, and through practical intramural activities. Common theories can be synchronized and shared through classes and seminars. A conceptual basis of health service bioethics and ethics based on social justice should consolidate theoretical aspects of risk concepts, cost-effectiveness analyses, health service research, management by objectives, participatory research, research-action, group dynamics, institutional analyses, conflict management, community work, and the epidemiological base for curricula and professional practice.

These are only examples of subjects that will bring students of various professions closer to a holistic approach aimed at creating a foundation of common ideals for UNI project work in the university setting.

Interprofessional approximation, started in the university setting, will solidify in the community. This is where learning by doing and learning by delivering service - whether in formal health sector units, in child care, schools, industry or homes - should constitute the strong point of projects. The presence of students and professors of various professions in a service unit should not be a burden, but a bonus. It joins the efforts of students and professors with professional and auxiliary service personnel to help refine service.

As an example, Figure 3 shows a hypothetical sequence of UNI project teaching-learning experiences involving its three components: the university, services, and the community. Each step leads to the next while providing feedback on previous curricular activities. Interprofessional planning and evaluation seminars in any of the UNI project settings will keep the teaching-learning process under constant surveillance, permitting necessary adjustments as the group advances in the learning process.
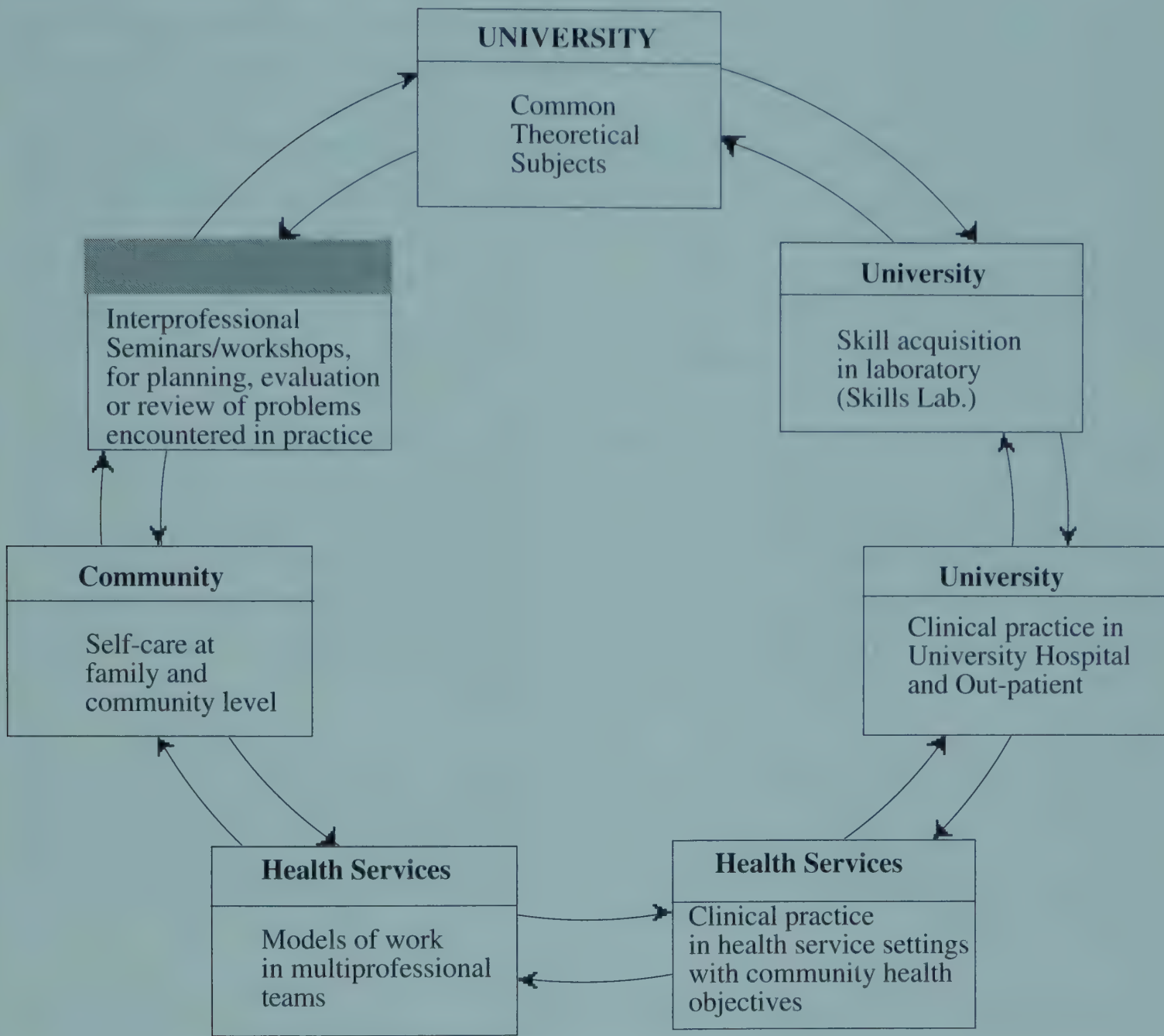


Figure 3. Main settings for interdisciplinary and/or multiprofessional teaching-learning in UNI Projects

## Continuing Education of Service Personnel

Developing SILOS and new educational models, and including the idea of teaching-learning in a multiprofessional team in a community setting, demonstrates the complexity and challenge of UNI projects. The permanent SILOS monitoring and evaluation system should display the amount and quality of services from the technical and human viewpoint. This type of information should be used immediately to provide feedback to the university and to the service component.

Flaws or deficiencies observed in service delivery are useful for designing continuing education or for educational supervision of service personnel. In universities, feedback should be used for readjustments, revisions, and even curricular reform if deficiency lies in student training during the intramural program or in the performance of professionals who were graduated by them. In any case, as mentioned in Chapter 4, establishing ad hoc recycling courses or refresher courses for service personnel would be an important contribution by the university.

## Contribution to the Community

Work and teaching-learning in the community, outside of health services, could strengthen their capability in this aspect of health unit work. The study of problems, surveys performed jointly, and participatory research are good ways to begin, as long as they are of short duration and followed by action. Communities in Latin America are tired of being objects of academic research. They look forward to being protagonists of their own destiny, whether through political rights in participatory democracy or through solidarity at the family, city block, neighborhood, or community level.

It is in this sense that UNI project work should become a legitimate partnership with the community - understanding its anxieties and helping it express and channel them in the health aspects of each profession as well as through intersectoral and citizenship methods. In this process of education, those being taught are as much the members of the community as are the students.

## Participation of Schools of Public Health

We have addressed the multiprofessional aspect of undergraduate education in the community setting. But to contribute to the building of the SILOS model, the team needs specific know-how in related disciplines. These are the objects of in-depth concentration at public health schools and in advanced health administration programs. The logic of UNI projects applies equally to these programs and schools. The idea of "learning by doing" is as necessary in undergraduate as in postgraduate education. This is especially true when it deals with training professionals in various careers to assume leadership positions in the

construction of SILOS, the basic cornerstone in health systems for the future. Thus, whenever possible, postgraduate students from schools of public health and health administration programs should take part in UNI projects.

## Final Considerations

Three other aspects require attention.

The first is the setting of limits between learning by doing - as a teaching-learning tactic - and using students as low-cost labor, without the goal of teaching them the competencies that are part of their professional profile.

The second is defining the limits and areas of professional overlap to avoid conflicts and to promote team efficiency.

Finally, it is necessary to point out the need to approach human resources holistically. Consider them resource mixes - although human - but who, in the interest of society, require the best possible configuration to perform tasks efficiently.

# The Structure of Planning

Francisco Tancredi and Marcos Kisil

The UNI initiative differs significantly from previous university projects to improve health professional education and university relations with the community. A UNI proposal does not, and cannot, develop independently of a comprehensive and ambitious planning process that seeks permanent change in teaching patterns, integration with services, and development of the community as a co-participant in change. The wish for change among potential participants in UNI projects will remain just that without innovative ideas for strategic planning for clarification and organization, and without long-term goals.

Levey and Loomba (1) mention that planning is the process through which actions and strategies are defined to take a system from a specific current state to a desired future state. Recognizing strong and weak points in a system (or group of organizations) and opportunities or needs of the environment is the starting point for taking action to obtain that future state.

Drucker (2) mentions, "The future, to occur, does not depend on that someone wishes it intensely. It requires decisions - NOW. It imposes risks - NOW. It requires action - NOW. It requires the distribution of resources and, above all, human resources - NOW. It requires work - NOW." Drucker's teachings make it clear that thinking in the long-term does not mean merely hoping things change within a specific period of time. If we do not act now, we may reap random, or even undesirable, results in the future.

Planning as an instrument for long-term thinking can vary considerably from one situation to the next. In the conquest of space, the long-term can be a century; for a company planting rubber trees, the long-term may mean two or three decades; for a youth trying to define a professional career, the long-term may be one or two years. And what does "long-term" mean for an institution educating health professionals? Perhaps five or ten years.

> Drucker teaches:
> "Short- and long-term are not defined by a specific interval of time. A decision is not short-term because it takes a few months to be executed. Important is the interval of time during which it is effective. A decision is not long-term just because it was made in the early '70s and implemented in 1985; this is not a decision, but a lazy digression. It is as real as the plan of an eight-year-old boy wanting to become a fireman when he grows up."

Almost all institution administrators will say that they have an administrative plan. In reality, this is not always true; it is possible to manage a system or company without a plan. The result is that daily decisions maintain the status quo of the institution. It is like driving a car correctly and carefully without choosing a destination.

Lewis Caroll's "Alice in Wonderland" includes a short dialogue between Alice and the Cheshire Cat that every administrator should remember:

> "'Could you please tell me how to get out of here?'" [Alice asked].
> "'That depends entirely on where you want to go,'" said the Cat.
> "'I really don't care very much,'" said Alice.
> "'In that case, it doesn't matter which way you go,'" said the Cat."

It may seem an oversimplification, but this short dialogue helps us demystify the question of planning. A lot has been said about the subject, and several techniques have been proposed. But it's difficult to imagine that any method is very different from the problem faced by Alice: to choose the paths (the decisions to be made now) to reach a destination (to which stage we want to conduct the system). Obviously, it is not easy to define clearly where we want to go unless we indulge our imagination. It is also not easy to say which decisions we must implement to arrive at the future we envision. We must, however, agree that these are crucial points in planning. Defining our future is an exercise that must be linked to the mission, functions, and vocation of the institution.

The mission of the institution covers its permanent objectives. For most institutions, it is unchangeable. Thus, a medical school's mission is to impart knowledge and prepare professionals to be useful to society; it would be unacceptable to define strategic objectives that distance the medical school from that mission.

The institution establishes ways to accomplish its mission and has a more or less permanent character. The mission of a health center is to help maintain the health of the population - performing primary-level outpatient care, epidemiological surveillance, and other services. Under certain circumstances, a plan can seek changes in these functions - introducing a short-stay system for less-complex cases, or transforming the health center into a mixed unit. Beyond defining needed resources, these kinds of changes would require negotiations with the community and the ministry. They must agree to the change in functions because it is not up to the center's administrator alone to make these changes. The work of the institution relates to its experience and specialization - its capability to perform certain functions properly. A hospital that has not been training resident physicians will require greater effort and structural changes if it wants to begin such training.

Defining the future of institutions - such as a university - where there is constant change in the power structure and where the power of individual action prevails requires more effort. This exercise must be founded on a precise and unrestrained diagnosis; the individuals and groups involved must be genuinely ready to arrive at a consensus for the benefit of the institution and the people involved. Decisions cannot be rooted in group interests, for then the exercise becomes an idle and exhausting dispute of individual wishes and positions. This "process" of conducting planning can be vital to the success of the task - more than the structure of the plan itself. It is, at least, a prerequisite.

The backdrop for a UNI proposal plan is a well-performed diagnosis of the institution, including analysis of strong and weak points; an examination of its context, including opportunities and threats; an analysis of alternative actions; a definition of strategic objectives; and a detailed concept of paths to follow to attain these objectives (tactical and operational plans).

## Strategic Planning and the Organizations

We define strategic planning as a disciplined effort to produce basic decisions and actions that shape and guide what an organization is, what it does and why it does it. Thus, strategic planning requires data collection, analysis of a problem, exploration of alternative actions and understanding of the impact of present decisions. It can facilitate communication and participation by different groups, accommodate diverging interests and values, and accelerate an organized decision-making process to implement the project successfully.

This should be the role of strategic planning for organizations involved in a UNI project, whether a university, local health service, or other organization. Strategic thinking can unify and prompt action that, as efforts of a multi-organizational project, should erase defined organizational limits.

Strategic planning can help an organization involved in a UNI project in different ways:
- To think strategically and develop effective strategy.
- To clarify future direction.
- To establish priorities.
- To make decisions today with regard to future consequences.
- To develop a coherent, defendable base for decisions.
- To acquire greater control over the future of the organization.
- To make decisions that affect different sectors of the organization.
- To solve major organizational problems.
- To improve the organization's performance.
- To act more effectively when circumstances change quickly.
- To establish teamwork.

For an organization to benefit from a strategic plan, the following basic elements are needed:
1. It must want strategic planning. This means leaders of the organization must agree on the importance of planning and its value to the organization's future. Their commitment is represented by a policy decision to perform a planning exercise that will be valued by all individuals responsible for the organization. In the case of multiple organizations, as in the UNI project, this effort should occur in all organizations involved.
2. It must have a clear definition of its mandate. When a problem arises, organizations are not always clear what is, and is not, expected of them. Sometimes, even an organization's

members are unaware of the laws they established, with their objectives, organizational forms, levels of authority and responsibility, and financing. Although there may be a certain consensus about what is expected, legal documents for its establishment do not always consider or support these expectations. In UNI projects, organizations should have social mandates to accomplish their objectives. This should be an integral part of the strategic planning process.

3.  It must have a clear definition of its mission and values. The mission of an organization should be its reason to exist, its social justification. Consequently, the organization must meet social requirements. It is always a means to arrive at a determined purpose - and not a purpose in itself. This mission must be shared by all members of the organization. The more obscure the mission is, the more likely members will be to interpret it based on their own viewpoints. Therefore, the same organization may have different "missions," according to these different interpretations. Clearly explaining the mission at the beginning of the strategic planning process can avoid conflicts. In UNI projects, this is done with participants from different organizations. In addition, basic values held by members of an organization must be clear from the start. Directors and personnel act within an organizational culture that is created and maintained by adherence to certain values. Early identification of these values should be a strategic planning priority.

4.  It must reach out to the exterior environment. Organizations do not exist in a vacuum. They are part of a broader context, constantly changing, that can effect changes in the organization. Thus, opportunities and threats that can affect the organization should be detected in the exterior environment. Usually, organizations have no control over external factors that affect them. These external forces can be political, economic, social, or technological (collectively called PEST).

5.  It must approach the interior environment. By monitoring resources, processes, results, and their effects, an organization can identify its strong and weak points. Usually, organizations easily identify their resources but have great difficulty pinpointing their operational processes. Although output is easily identified, little is known about its social impact. This lack of information usually helps maintain a certain organizational status quo. Awareness of the social impact of a product would lead to minimum performance criteria for resources and processes used. For example, low performance should result in a review of how resources are used; resulting changes can reallocate resources, change organizational structure, and transfer power within the organization. Strategic planning that assesses current organization performance can be a destabilizing force to the organization. Therefore, the political will becomes quite important to the success of this exercise.

6.  It must identify strategic subjects that affect the organization. The elements identified above underscore the importance of identifying topics of interest for strategic planning, as well as subjects relating to organizational policies (mandate, mission, cultural values) structural performance, and organizational processes, as well as their suitability to the changing environment. The definition of strategic subjects is, in itself, a potential

source of conflict because definition implies purpose (what), means (how), philosophy (why), location (where), timing (when), and principal agents (who).

7. It must establish a strategy to manage subjects. An organizational strategy should seek consistency among rhetoric (what is said), choice (what is decided), and action (what is really done). A strategy should be politically acceptable, technically feasible, and in accordance with the expected mission of an organization. It should be acceptable ethically, morally, and legally.

8. It must establish a vision of the future. This vision would encompass a strategic plan for the organization because it also represents a specific plan's view of success. As with any planning tool, a vision may be a potential source of conflict. It may be an important ally to the team, making possible the support of members of the organization who will help implement the plan. It may, however, represent a threat to the plan because it can outline a new distribution of power and influence that may not be acceptable to groups or individuals who foresee their privileges being affected.

## Significance of the UNI Project for the Institution

A UNI proposal should not be seen as part of a wider institutional transformation. The project will have objectives and aims limited in time and in scope, but it will serve as a significant boost for more permanent changes.

An innovative project introduces new activities and operational forms to an institution; it is meant to create new products to attain new and better results, or to improve traditional work products and results. Institutions are not always ready to allocate resources to support an innovative idea; their budgets and personnel are usually committed to traditional activities. The project, however, has the feature of redirecting the work of individuals, allowing them to dedicate time to a new activity, and to allocate physical and financial resources - generally obtained outside the traditional organization budget - that make new outcomes feasible.

Thus, there must be managerial flexibility in a project, for the use of human and material resources, in order to succeed. Innovative projects in which individuals of the organization can not or would not change their ways of doing things are destined for failure. The same is true for projects in organizations that are not willing to manage resources in a more streamlined manner.

Indeed, more important than obtaining results is the capability of the institution to permanently adopt the new activities of the project, which enables the "production" begun by the project to continue. There are many examples of projects that seemed to be successful while they had additional resources (i.e. external financing) but eventually died out or created burdens that the institution could not, or would not, shoulder.

The project requires certain activities and intermediate objectives that reach for a final result; these, in turn, open the window for future accomplishments. We could describe a UNI project as an hourglass (Figure 4): the narrow part of the hourglass would be the results sought, i.e. the creation of a local health system model with community participation and the establishing of a new teaching model; the lower part would represent intermediate objectives and activities to establish those models; and the upper part would be the long-term effects of applying those models, namely improved effectiveness and efficiency of health services, better overall health condition of the people, influence in the establishment of health policies, participation in service planning and management, changes in student and teacher motivation and behavior, the graduation of professionals who better understand the local reality, and more.

Consequently, the project is an attempt to create a desired and feasible future. One could say that its final outcome is limited to a certain degree, but it is part of a movement for growth that provides the requirements to obtain future results. Thus, planners must visualize the impact of their efforts on the distant future, the results required in the mid-term, and short-term actions and decisions that need to be made.

Four features distinguish UNI projects from other enterprises:
a)  They have objectives.
b)  They involve interrelated and coordinated activities.
c)  They have a specific duration, with a beginning and an end.
d)  Each one, to a certain point, is a unique initiative.

## Phases in Strategic Planning

The UNI proposal will be set up in three phases. The first strategic phase will define overall project aims, which will permit the setting of mid- and long-term objectives. Three of these aims (or final objectives) are the same in all letters of intent:
a)  Establishing a local health system.
b)  Establishing a new academic model.
c)  Community participation.

Reaching these goals requires that other intermediate objectives depend on each situation and its context. Thus, in the second phase, different final and intermediate objectives will be defined. This creates a hierarchy requiring each step to be accomplished before achieving others.

Obviously, a project as complex as the UNI proposal means each intermediate objective will have its own set of varyingly complex actions. Here are some examples of intermediate objectives in establishing a local health system:

To influence health policies ← | ⇒ To establish practices of social participation in the services

Dissemination of ideas ←

Field training of health professionals ← | ⇒ To improve efficiency of local health systems

Graduation of professionals more adjusted to local needs ← | ⇒ Reinforcement of the image of the University before the community

Education of health professionals and research ← | ⇒ To improve degree of satisfaction of needs

Changing students' attitudes and behaviours ← | ⇒ Broaden the extension of services

Improvement of the level of health of the population ←

Producing changes in teachers' roles ← | ⇒ Permanent participation in the advancement of social sytems

Improvement of healthservices effectiveness ←

Producing permanent curricular changes ←

Improvement of user satisfaction ←

Improvement in the services

Improvement in teaching

Implementation of a new Local Health System Model

Creation of a new Academic model

Participation of the community

Training courses for local health managers ← | ⇒ Referral and back referral systems

New curricula design ← | ⇒ Increment in number of hours devoted to in-service teaching-learning

Supervision and training of health personnel ← | ⇒ Creation of directing commissions

Participation of students and teachers in community activities ← | ⇒ Joint work of students and teachers of various schools and careers

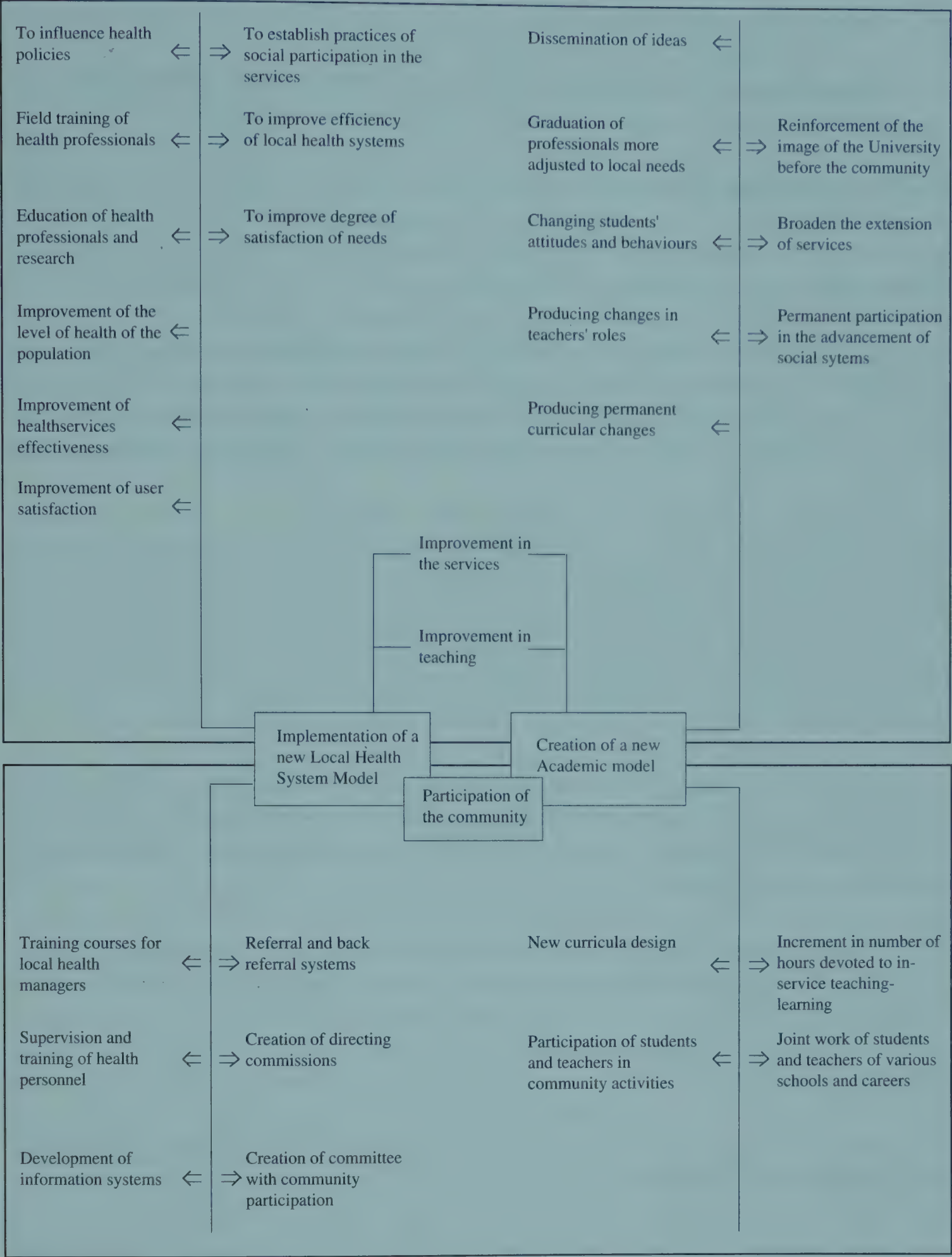Development of information systems ← | ⇒ Creation of committee with community participation

Figure 4. An hour-glass shaped example of a UNI Project

a) Training of local level managers.
b) Expanding population coverage by basic health actions.
c) Refining referral and back-referral systems among different levels of the health system.
d) Increasing effectiveness and efficiency in the use of hospital beds, etc.

Clearly, each of these intermediate objectives is a project in itself; each in turn requires more detailed planning. Each subproject represents an intermediate objective of the overall project, requiring the definition of other intermediate objectives of lower hierarchy. Each of these subprojects represents a tactical plan in relation to the overall plan.

We can compare the transition from the first strategic planning phase to the second sectoral planning (or tactical) phase to an "explosion" of the larger plan; it will be subdivided into various plans where planners diagnose the situation in greater detail and establish increasingly specific objectives, analyzing their feasibility, alternatives, strategy, and so on.

The third phase involves assuring that the sectoral plans are in sync with the overall strategic plan. It is essential to submit the entire group of subprojects to a global analysis. If inconsistencies are found, final subproject results should be revised. The importance of this third phase is vital for program comprehensiveness. To achieve the gestalt that should be the trademark of the UNI Program, the mistake of presenting a fragmented proposal directed at particular interests within subprojects must be avoided.

Consequently, we are interested in two planning approaches: strategic and tactical-operational planning. The strategic planning phase will define the overall lines of action of the UNI Program. The tactical-operational phase will arrange and prioritize the objectives of sectoral projects.

The strategic planning structure can be divided into the following phases: a) strategic diagnosis, including the institutions and their context; and b) strategic planning itself, including the definition of a target-image and strategic objectives.

## Strategic Diagnosis

Undoubtedly, a complete strategic diagnosis is essential for a proper UNI proposal. This will not be an easy phase, given its complexity.
For a quality diagnosis, you need adequate information; all data, however, should be interpreted. In this regard, there is a clear analogy with medical diagnosis: the findings from anamnesis, physical exam, and laboratory work are interpreted and translated into a syndrome, and perhaps etiological diagnosis, but are never used in an isolated manner as findings themselves. In other words, data interpretation - the final product of analysis and judgment of value made by the professional - is considered eminently qualitative. Isolated

quantitative data (on aspects where these are justified) have little intrinsic value.

Likewise, information collected for strategic diagnosis should always undergo interpretation. Isolated data on production and productivity of health services, population morbidity, etc., even when extensive and complete, are not a diagnosis; they are merely observations necessary for individuals - who are able to interpret them with regard to context and institutional reality - to make a judgment.

We should highlight a point that has limited many plans: the precision of information collected to make a diagnosis. There are many stories of plans never implemented because planners became lost in an interminable search for "precise information." They refused to offer judgment without having complete quantitative data that could "prove" their thesis. In this they wasted much time, performing unending data collection, sacrificing time that should have been dedicated to data interpretation and formulating the plan.

Estimating primary causes of death is an example of this dilemma. In almost all of our countries, it is nearly impossible to obtain precise information on morbidity at the primary level of care, because most health centers do not keep reliable medical records. Still, most physicians who work in these health centers are capable of furnishing an estimate. If a planner requires precise information, he will waste much time and resources performing a survey in the community, while an opinion survey performed with physicians would be much faster and less costly.

We are not advocating carelessness or superficiality in handling information. Nevertheless, one must keep in mind the principle of "economy of information" - balancing the amount of time and resources we can allocate to this phase with the risk of mistakes from imprecise information - and decide what level of precision is needed. Planning is a dynamic process that requires flexibility and know-how; decisions cannot be postponed indefinitely while waiting for a cascade of information. If the existing information system is unreliable, the planner should set as an objective to redesign and improve the system.

Surely a UNI project will require the analysis of four major areas to formulate a diagnosis:
a) Local health service institutions.
b) The university and its departments and careers involved.
c) The population of the community selected.
d) Relations among the university/services/population, as well as relations between the organizations involved in the program.

Appendix 3 presents a list of important variables for the UNI Program. They are arranged in the form of a checklist to be followed in this phase. But it is not a complete list. The suggested bibliography includes various texts with an in-depth discussion of the elements of a diagnosis.

A strategic diagnosis involves the selection of subjects to be approached by the strategic-planning group. To choose these subjects, use a technique that identifies strong and weak points in each organization involved, as well as opportunities and threats in the environment where planning occurs.

Using the concepts described by Oliveira (3), we mention the following:
- A strong point is a characteristic of the organization that favors addressing selected strategic matters. This is a variable that can be controlled by the administrator and should be explored during planning, since it favors advancing toward a desired future. A university with previous experience in educational activities at the community level possesses a strong point.
- A weak point is a characteristic of the organization that discourages addressing selected strategic matters. It, too, is a variable that can be controlled; it should receive special attention by the planner so that it can be corrected. Lack of coordination among different health system levels, or lack of managerial skills by health unit chiefs, are weak points that will hinder the ideals of the UNI project.
- Opportunities are environmental forces, not manageable by the organization, that may favor strategic action so long as they are known and taken advantage of while they last. National health policy movement toward decentralization can be an opportunity for UNI projects.
- Threats are environmental forces, not manageable by the organization, that create obstacles to its strategic action. But these obstacles could be avoided as long as they are known on a timely basis. The withdrawal of investments in social sectors due to the financial crisis in Latin American countries, or the lack of flexibility of education ministries to manage financial resources for public universities, are examples of threats.
- Priorities deserve special attention and more immediate action because they have higher social significance or may be a limiting factor to proposed objectives.

## Target-Image Definition

The target-image specifies the look of the system in the long-term; it is the reason for the objectives the project will pursue. The target-image serves as a desirable and feasible horizon.

The three essential components of a target-image of a UNI proposal are these:
1. The existence of a local health system, characterized by universal coverage, comprehensive actions, integrated system sectors, effectiveness, and efficiency, as well as wide utilization as a teaching field for health professions.
2. The existence of a system to train people - especially from the university - based on multidiscipline and multiprofessional principles, where learning at the local level is a regular and permanent practice, giving rise to proper professional training according to population needs.

3. The presence of a health care and training model, in which the community participates in a permanent, organized manner to improve quality of service and overall health levels.

## Definition of Strategic Objectives

Defining strategic objectives is an exercise in creativity and realism. Creativity is needed to fully explore all possibilities to arrive at the target-image; realism is needed because it requires experienced analysis of limitations, weaknesses, and vulnerabilities of the organization to avoid unattainable objectives - mere wishes - that could be discouraging in the future.

Knowledge of strong and weak points, of the mission and vocation of the organization, and opportunities and threats in the environment constitute the platform from which the planner can select realistic objectives.

Objectives are outlined through a repetitive process of deduction and induction, according to hierarchy and priorities. Sometimes deductive rationale will become clear - such as when we ask, "Which intermediate objectives need to be reached to arrive at a specific result?" At other times, we must apply inductive rationale and ask, "Will reaching the objective help us attain another objective of larger scope?"

The result will be a group of overall objectives that will form the skeleton of the UNI project. Among them, we can identify three that relate to the project's final results:
a) The implementation of a local health system model.
b) The establishment of a new academic model.
c) Community participation throughout these processes.

Other objectives shall be identified, such as the impact the project seeks. Some examples are: more suitable health professional education; changes in the way professors act; permanent involvement by the university in health services and the population; increased effectiveness and efficiency in local health services; improved health levels; increased community participation in health services management and in defining health priorities, generating knowledge and technology, etc.

Other objectives relating to important intermediate steps may also be included. We believe that the strategic plan should point out certain modifications to universities, specific careers, or core services.

The "tree of objectives" technique is an excellent tool for prioritizing objectives. It helps the group visualize existing relationships and the hierarchy among different objectives of a complex project.

## Logical Structure of the Project

The conclusion of strategic planning will generate a variety of subprojects that need to be detailed and specified. As mentioned above, the macro plan "explodes" into various tactical plans or subprojects. Each one must then be worked on and detailed individually to establish a logic in actions.

This is a cumbersome phase of a complex project because various subproject planning initiatives must be performed simultaneously and in concert.

"Logical structuring" (4) is a helpful tool for this phase. In essence, the technique suggests specifying a project according to two steps of logic:
1. Vertical logic, which establishes cause and effect among project purposes, products required to reach these purposes, and input (activities, resources) needed to generate output.
2. Horizontal logic, in which the planner establishes measures to verify activities, outcomes, and the scope of objectives, as well as the presumptions (most probable environmental variables) considered necessary to achieve them.

Vertical logic admits the following:
a) Every project is designed to contribute to a specific goal. The UNI project goal would be the impact and target-image already mentioned.
b) To contribute to the goal, the project must have specific purposes. The purposes of the UNI project are the implementation of a local health system model, the establishment of a new academic model and community participation.
c) To arrive at these purposes, the project must generate a group of products. Among UNI project products are effective student participation in community activities in a regular and permanent manner, health unit directors with adequate managerial skills, and mechanisms for formal popular participation.
d) To generate these products, the project must also have specific input or activities. UNI activities would include managerial skills training for local health system directors, curricular reform to extend student and professor activities in services, and identifying and approaching organized community groups.

Defining, clarifying, and prioritizing the goals, purposes, products, and supplies of a project allows planning groups to outline the relationships among actions to be developed and to communicate their intentions and strategies to all participants. Thus, the entire team will be able to work in harmony.

Horizontal logic will provide the project (or subproject) manager with a clear view on the progress of the enterprise and on points that must be followed more closely. As indicators and the means to verify them objectively become clear, horizontal logic allows planners

and project (or subproject) managers to anticipate important questions to be answered by monitoring and evaluation processes.

The "objective tree" and "logical structuring" techniques are tools that complement each other in this phase. The first looks for consensus within the planning group, to expand ideas and outline purposes, products, and input as suggested by logical structuring. Since it is a graphic representation of project ideals, the objective tree will create overall comprehension, harmony, and coherence in each part of the project. Also, in defining supplies (i.e. activities that must be performed and require human and material resources), logical structure provides the necessary elements to define the project budget.

## Evaluation

Evaluation of a UNI project will be a complex task. To be complete, the project plan should at least include a draft of an evaluation method. This method should specify the following:
a) The important questions an evaluation process should answer. These questions come naturally from purposes established by the project.
b) The areas on which the evaluation should concentrate. These areas include implementation, important results (both expected and unexpected), and the context for project development that, during the course of actions, may create favorable or unfavorable conditions for implementation and results.
c) How the evaluation will be used for project management and to whom it will be addressed.
d) Mechanisms to conduct the evaluation.

## Monitoring and Evaluating the Planning Process

The work involved in strategic planning will result in the final project proposal. This proposal should have features that allow it to be:
* Feasible, in that objectives can really be attained and that institutions involved are able to perform the activities defined;
* Viable, in that resources are available, or that the possibility of financing is realistic.
* Coherent, in that the different segments (subprojects) are a harmony of intentions that help achieve the final goals.
The success of UNI projects largely depends on the way they are conducted and on the accuracy of the premises that served as the base for planning. To assure these elements, adequate planning is essential. In this regard, creating the plan is itself a project requiring careful monitoring and evaluation so that the qualities of feasibility, viability, and coherence can be reached.

The fact that it is a multidepartmental and multi-institutional project allows us to anticipate planning phase difficulties (as well as those in the execution phase). In most institutions,

these characteristics result in a unique and positive experience; however, lack of proper coordination and an inadequate process of planning evaluation could cause traumatic and negative results, such as the breakup and/or isolation of the planning group.

## Bibliographical References

1.  EVEY, S.; LOOMBA, N.P. Health care administration: a managerial perspective. J.B. Lippincot Co., Philadelphia, 1973.
2.  DRUCKER, P. F. "Administraçao: tarefas, responsabilidades, práticas." Volume 1. Capítulo 10: "Planejamento estratégico: a habilidade empresarial," Pioneira, São Paulo, p. 131-39. 1975.
3.  OLIVEIRA, D.P.R. "Planejamento estratégico. Conceitos, metodologia, práticas." Editora Atlas, São Paulo, 1986.
4.  MCI - "El marco lógico. Una guia para gerentes para diseñar y evaluar proyectos en forma cientifica." Mimeograph, Washington, D.C.

## Suggested Literature

FRAME, J.D. Managing Projects in Organizations: How to Make the Best Use of Time, Techniques, and People. Jossey-Bass Publishers, San Francisco, 1989.

BANGUERO, H.; QUINTERO, V.M. "Los proyectos sociales I. Guia para su identificación, selección, formulación y evaluación." Instituto FES de Liderazgo, Cali, Colombia, 1991.

BAINBRIDGE, J.; SAPIRIE, S. Health Project Management. A Manual of Procedures for Formulating and Implementing Health Projects. World Health Organization, Geneva, 1974.

DELP, P. et al. Objective Trees. IN: DELP, P. et al. Systems Tools for Project Planning, PASITAM, 1977.

# The Process of Organizational Change

Paulo Roberto Motta

## Context for Change: Social, Economic, and Political Infrastructure

The aim of government organizations is to promote the wealth of society. These organizations offer services that assure a certain level of social and financial well-being, as well as regulate individual and collective behavior. However, infrastructure and existing institutional conditions limit the scope of their decisions and actions.

In this instance, infrastructure means the political institutions, standards, and traditions that shape the power structure, the distribution of wealth, and individual rights and obligations. Political infrastructure comprises the limits of organizational action and human interaction. These limits include restrictions in individual choice in certain types of administrative behavior and, above all, in conditions under which certain actions can take place.

In public administration, for example, infrastructure is determined by the type of relations between the state and society. The stronger the tie, the more extensive are citizen's rights, and the more the state becomes a mirror of society. The state apparatus and institutions that compose it tend to function along the lines of society's desires and demands. When that tie is strained, the state becomes more of an instrument of power for privileged groups. These groups dominate part of the administrative machinery of the state through various mechanisms. Thus, the state responds less to society interests and more to the privileged groups.

In Latin American societies with remnants of the pre-capitalist era, state bureaucratic structures are highly conditioned by traditional political infrastructure, satisfying the needs of privileged classes and political groups. The state has a weak foundation in such a society; it is dominated by groups and political clans looking to assure their survival.

In societies with remnants of the pre-capitalist era, resources are used to satisfy political power interests and their private social interests. Groups seek cooperation, assistance, and mutual protection, using formal channels of administration. They also use an informal support network of communication and integration linked by ties of political, religious, family, neighborhood, sponsorship loyalties, and others. These are active groups that transform the state into a minefield of political battles.

These groups are part of the social, political, and financial context that defines the state. Thus, they cannot be ignored in the current phase of regional development or when considering state modernization and community service delivery models.

Much of the inefficiency in government comes from restrictions imposed by the political infrastructure, rather than from normal managerial errors. This means the inefficiency is already determined; laws, regulations, standards, and distribution of power limit managerial ability to promote progress and development. Local innovations in the public sector are essential, but they are not enough to create high efficiency and effectiveness in public-sector management. Still, government organizations control important financial and power resources and so have great potential to influence existing political conditions.

## Basis for Change: Organizational Action

Government organizations grow and develop by occupying spaces granted by political-institutional conditions and by taking advantage of opportunities offered to them. Thus, they generate new alternatives, providing society with new choices and helping to change politically determined restrictions.

In the process, they learn new technology, serve new clientele, and produce new financial gains. Consequently, they generate new sources of power while acquiring innovative methods of action. They influence behavior, attitudes, expectations, and values, arousing demands not yet explored by the political system.

In the battle for growth and development, government organizations look for political support as they process and satisfy specific demands. In this process, they re-articulate and regroup their own interests to offer support and formulate new demands. Thus, they undermine traditional communication and political support bases.

Growth normally generates complexity and a culture in itself. This causes a government organization to acquire values and habits that make it unique compared to other organizations, while developing interests apart from those of the political system. This conflict of interests and values creates contradictions that promote change.

For these reasons, government organizations can become potential sources for institutional innovation. See Table 2.

Although government organizations are created within the limits of the political system, they grow to meet the opportunities that social and financial change offer. That growth will not remain within the political boundaries; the organization's development generates new sources of power that force change in those boundaries. Thus, the more efficient, competent, and effective a government organization is, the greater the chance that it can become a powerful tool for political or institutional change.

Government organizations, therefore, can become enterprises for change. By introducing technology and personnel training, these organizations can acquire a more advanced

Table 2. Organizational actions that generate social and political innovations

| | | |
|---|---|---|
| • New knowledge and skills | ➡ | External interests; unusual behaviour;new values; demands; and support |
| • Maximization of opportunities | ➡ | Offering new choices, and alterations in the limits of political control |
| • Growth and survival | ➡ | New forms of articulation and aggregation of external interests |
| • Complexity | ➡ | New culture and self-interest |

behavior than initially expected. Through innovative organizational action one can do the following:

a) Discontinue technocracy, interrupting or substituting the use of traditional techniques with those that are more current and advanced.

b) Produce new knowledge about the organization and the context in which it operates, threatening individuals in powerful positions who have restricted knowledge.

c) Take greater risks in breaking with existing structure in an attempt to improve the organization financially.

d) Develop a new viewpoint, or an alternative for the future for society or a specific clientele, based on greater organizational efficiency and effectiveness.

e) Open new channels of communication between the public and its government by satisfying existing demands and encouraging social groups to invest in the search for new goods and services that contribute to development.

## Progressive, Incremental Change

It is impossible to change the existing controls by simple administrative revision. The institutional infrastructure that guides the government organization can be altered only by changes in laws and political behavior, which each society will do in its own time and manner. However, administrative intervention helps modify the political infrastructure when rifts occur in the system. This gives emerging groups access to more and better services.

These rifts in the political control system also increase the relative prices of control by traditional groups. When relative prices change, power relations are altered to some degree. The power of traditional groups in political negotiations decreases, and some existing values are transgressed, such as hierarchies of power distribution, generating new conditions for its redistribution. In this sense, power structure will have to be rearranged to accommodate new political groups. This incremental, progressive change eventually will change public administration.

Incremental change to a political system is easier to introduce and generates less resistance than programs advocating radical change. Radical change is like transplant surgery: it entails a high risk, is overly complex and long, has a high potential of rejection, and can have serious consequences or, at best, highly unpredictable results.

Change itself, already under way in government organizations, can be conducted with a goal to improve efficiency and quality of goods and services. Other changes can be programmed specifically to modify political power through the effects of these goods and services and by extending the influence of a specific government organization. The result will be an extension of citizens' rights, better income distribution, and greater efficiency and effectiveness in public administration.

Incremental change means new commitments, objectives, and rules for public administration. Some could provide significant advances toward modernization. They are victories that should not be refused in favor of more radical change. The search for modernization must be pursued by all means, above all other goals. Developing and introducing innnovations in government organizations is one way of doing this; the larger the innovation, the greater the social impact of change.

The incremental viewpoint sees organizational change as evolutionary and progressive. Change is cumulative, occuring through constant adaptation and reaction to social and economic transformations. From this perspective, organizations undergo permanent change and search for a dynamic balance through innovation. The incremental viewpoint, however, is not linear; evolution can occur through the solving of conflicts and the management of contradictory and permanent social and organizational interests. Change does not necessarily pass through predetermined phases, nor does it mean something temporary or limited in time. Seeing change as evolutionary does not mean regarding it as something exclusively sequential and logical. The process of change is permanent and progresses with interruptions, conflicts, and tensions that cannot be resolved in the short-term, or at predefined moments.

In contrast to the radical perspective, the incrementalist viewpoint has the following advantages:

a) It approaches change as something permanent and typical in organizational life and not as an extemporaneous shock or trauma.
b) It changes the link of the organizational present with the past without breaking relevant dimensions of cultural and organizational identity.
c) It assures greater relative stability, guiding change toward desired goals.
d) It generates less opposition and resistance to change.
e) It allows for programmed rearrangements in power coalitions with a view toward wider participation by all.
f) It makes the effects of change more predictable.
g) It instills more efficient ways to deal with conflicts that are part of the process of change.

## Approach to Change: The Global Perspective

Organizational change involves significant modification in existing structure, attitude, and behavior. Change is a break, even if gradual, with the organizational status quo. Change can be the natural consequence of historical happenings and factors that influence the organization. The organization reacts and adapts to changes in its environment: it usually innovates when it makes the decision to reformulate its values, structure, and operational techniques and processes.

Innovation does not occur spontaneously; it requires a sense of direction and an intent to change the existing organizational condition. Innovation requires motivation to overcome obstacles and improve performance, management skills, and implementation of new ideas. It also requires planning to define its need and relevance, to mobilize its resources, and to direct change toward the desired goal.

Innovation is change in the positive sense; it means introducing something previously unknown into the organizational environment. Innovation is seen as something desirable when current practices are considered irrelevant and inefficient, or when the organization wants to improve its product, service performance and quality.

Innovation presumes that something was invented, discovered, and implemented before. That, in turn, implies previous creativity without necessarily suggesting that the creative process always precedes innovation. Creativity and innovation are continuous, parallel processes; they occur during all phases of the introduction and use of new ideas. Innovation is application of the uncommon, the new; it is a kind of creative solution for problems as they are discovered. There is no previous formula for innovation because innovation is part of a process that discovers its own rules. Thus, there is no need to establish a logical sequence of events between invention and innovation.

The decision to innovate, in essence, is a strategic one: it faces the same problems and obstacles. These problems, however, involve greater difficulties between the decision and

the act of changing. In addition to the desire to implement new ideas, the decision to change requires a concrete alternative for action and knowledge about the organization. The act of changing generates both support and resistance; it takes place in a conflicting environment where values and interests are broken before new habits and power coalitions consolidate. Innovation is as much a creative process as a destructive one. To build something new, one has to destroy the old. This transition usually causes conflict because it emphasizes contradictions and clashes between the forces of stability and change.

Innovation - as something planned and directed - has complex implications, ranging from the context in which it is proposed to the individuals and interests it affects. The innovation process is systemic and comprehensive; even if performed in only part of the organization, it affects all of it. To be effective, it is necessary to approach the entire organizational system, as well as its individual, interdependent parts. That is why all modern proposals for organizational innovation tend to look for a systemic and comprehensive perspective. Even starting from a specific dimension, proposals try to arrive at a systemic and interdisciplinary approach.

## Contemporary Emphasis: Organizational Culture and Rules of Conduct

The current organizational status is an arbitrary structure, perceived by its members as both orderly and disorderly. Individuals with an orderly view usually consolidate internal relations based on the attribution of rights and obligations and try to develop a feeling of greater security and identity with the organization. These individuals seek to preserve the organizational status quo.

Individuals who have a disorderly view of their organization have difficulty adapting and conforming to existing objectives, standards, and values. They feel insecure and identify very little with the organization. These individuals advocate a new organizational order that changes their current set of rights and obligations; they promote the idea of change constantly.

Therefore, there is an implicit program among the members of an organization to promote and react to change. This programming for change has been analyzed through different social approaches. Some emphasize the individual dimension, approaching the subject of handling change as a personality matter. Others have a more comprehensive view, defining it as a matter of adaptation of reference groups, or even to the system of rights and obligations imposed by the organization. Only recently has the search to wholly understand organizational change centered on a broader dimension, or on organizational culture. Every approach taken on change has resulted in proposed action, as explained in Table 3.

The study of organizational culture is based on the premise that there is a uniqueness to each organizational enterprise or public institution. The organization is taken as a social unit and

studied in the same way as in anthropology, when a population, tribe, or any social group is analyzed. It is assumed that each organization, in spite of similarities, has its own values and habits that make certain administrative behavior exclusive. By analogy, organizational culture is a set of ideas, beliefs, knowledge, customs, habits, skills, values, symbols, and rites that characterize the organization.

Application of the culture concept to the organization tends to suffer from the same generality and ambiguity it encounters when applied to a population or social group. What is or is not organizational culture? Which values and beliefs are part of organizational culture, and which are not? In a sense, one could say that organizational culture is only made up of values, habits, and behavior resulting from a collective experience and shared by members of the organization.

Table 3. Main propositions for organizational change through approaches related to the social dimension

| Approach | Basic unit for analysis | Priority objectives for change | Central problem to be considered | Main proposal for action |
|---|---|---|---|---|
| PSYCHOSOCIAL | Individual | Alter individual perceptions about the organizational reality with regard to conformity or non-conformity with change | Concerns with the unknown and unfamiliar, and reinforcements, incentives and creativity | To ensure individual security in the process, avoiding the creation of obvious losers, and valuing and rewarding individual innovations. |
| SOCIAL | Roles and status | Examine roles, functions, and organizational status | Criteria for redistribution of rights and duties | Define and clarify, as soon as possible, the expected changes in rights, duties, and relationships; establish new relationships of duties with rewards such as career, promotion, benefits, etc. |
| SOCIO-PSYCHOLOGICAL | Reference groups | Alter group norms and behaviours that affect participation of the individual in organizational change | New standards of reference and identity in the organizational context | Develop and broaden the participation of individuals in the decisionmaking process, respect the networks and informal links established or to be established |
| CULTURAL | Values and habits collectively comparted | Examine the various elements that constitute the character of the organization, particularly those that are more or less resistant to change | Threats to unity and autonomy, and destruction of existing beliefs, values and habits | Preserve as much as possible the collective values of organizations, and develop transparent, incremental, and sufficiently extensive ways to introduce new values |
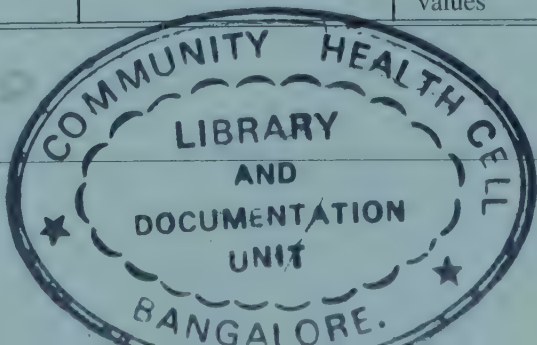
Consequently, organizational culture represents the result of the adaptation of an organization to its environment; its collective values are considered relevant, to be preserved and taught to new members. The formation of organizational culture assumes that new members of an organization will adopt these values.

But in the modern world, the speed and nature of social change have greatly modified this principle. The culture of an organization cannot be formed exclusively through values and habits learned by older individuals because the constantly changing environment requires those internal beliefs to be reformed. Also, younger individuals recently joining organizations are more apt to reform internal values than they are to adopt old beliefs and habits. Young individuals are socialized outside of the organization in a manner substantially different to the previous generation. They are more distrusting of things of the past and more open to change and living with new habits and different behaviors.

Accepting the existence of an organizational culture, however, leads to the following beliefs:

a)  There are characteristics that differ from one organization to the next and that condition typical behavior in reaction to change.

b)  There is a tendency to defend and preserve habits that characterize the uniqueness of the organization and that assured its survival in the past.

From the cultural point of view, organizations in the process of change will see a clash between groups that feel threatened by change and those who desire it. These clashes can lead to a break with fundamental values of organizational cohesion and identity.

In that light, a process of change must have the following characteristics:

a)  A weakening of existing organizational culture by breaking with old habits and administrative behavior standards, as well as through the disintegration of old groups and old individual commitments.

b)  An appearance of a new organizational culture that encourages individuals toward new standards of administrative relations and behavior, as well as the formation of new groups, new commitments, and a new value system.

c)  An increase - not a reduction - of internal conflict. This is due to the strengthening of organizational dualism, with greater conflict between the patterns of uniformity and stability and patterns of diversity and change.

Consequently, the innovation process is a mixture of positive expectations and consternation in relation to the individual, his or her work, and the organization. From the onset, organizational change imparts the idea that the individual's system of profits and losses will change. A climate of expectation and consternation arises; this increases the clash of values and manifests latent behavioral attitudes in the organizational environment.

Some positive aspects of the initial stages of change are:

a) A weakening of restrictive power and authority, causing a reduction in work and production pressures, as well as diminished compliance with existing administrative methods. In other words, this may create an expectation of broader individual convenience, including greater flexibility and freedom of action.

b) Greater participation in the decision-making process, with the possibility of influencing decisions that affect the professional life of the individual, his or her attributes and responsibilities in the organization.

c) Increased emphasis on pragmatic standards for internal decisions, with less use of unfamiliar ideas and experiences.

d) Solutions to predominant organizational problems (structural and behavioral), generating greater optimism over the usefulness of change.

e) Greater potential to increase individual profits through power, income, and prestige, with a subsequent rise in the standard of living.

f) Better managerial performance as the organization grows and develops.

With regard to concerns, one should remember that members of an organization may resist change due to organizational and managerial pressure, personal reasons such as fear of the unknown or insecurity, and objection to the way the process of change is conducted. These concerns usually increase in the following situations:

a) No communication of the objectives for change. This can lead to different interpretations and, consequently, increased tensions and conflicts.

b) Not allowing participation by the individuals affected.

c) Lack of consideration of the values and standards of the organization's subsystems.

From the cultural viewpoint, innovation processes are far from calm, quick, and certain; they take place with interruptions - sometimes with tension - and require continuous control during their course of action. This control requires that individuals involved in change have in-depth knowledge of the process so they can manage it efficiently and direct it toward its objectives.

Consequently, we must consider the following cultural foundations on the nature of change in organizations:

a) Values, loyalties, and commitments do not change rapidly; they require a long and well-planned transition period. New commitments with innovative ideas are frequently made at the beginning of the process of change and are more apparent than real. As the process advances, continuity - or rebirth - of past loyalties becomes more evident, and the pulse of the process is reduced.

b) The nature, scope, and speed of change differ greatly among organizations, although there are certain common patterns. Differences occur in all phases of the process - from the capability of generating new ideas to the level of adaptation and implementation of change.

c) Innovations bring interruptions and tension because of the risk presented to organizational culture when new ideas are introduced. Although these interruptions and conflicts are a part of the organizational environment in any case, they are stressed in transition periods. However, directors and personnel can show a very strong level of union and consensus at the beginning of the innovation process. This sometimes occurs in cases of external consultations; it creates a cultural defense by members of the organization against the external elements evaluating them. Usually, conflicts and differences reappear as the process goes on.

d) Systemic properties of the organization mean small changes can cause large rifts or have consequences other than planned. Thus, involvement by all parts of the organization is vital for the success of an innovative process. Also, it is necessary to consider integration and disintegration as forms of culture themselves, not just a capability of the agents for change or the power of the director.

Following are proposals on the conduct of the intervention diagnosis:

a) Observe the integration and discrepancies of existing values and commitments. The adoption of change and solution of conflicts are more important for acceptance than substantial content or technical-rational arguments of innovation projects.

b) Do not worry about details or specific information. Try to establish standards and characteristics particular to each organization. Find specific information capable of characterizing an organization and differentiating it from others. Similarities define the parameters of a conceptual analysis and intervention structure, but the knowledge of differences ensures proper control of change to attain the desired goal.

c) Re-examine continuously the objectives and mechanisms of change. The success of innovation depends on the locality and the way innovation is initiated by means of interaction and subsequent control. Organizational socialization causes individuals to present a cognitive, evaluative, and affective structure at the beginning of the process of change that is more uniform and reliable than real. Observe the validity and reliability of data collected at the beginning of diagnosis, during the entire intervention process.

d) Try to define crucial relations, criteria and burdens of the organizational decision-making process as early as possible. Acquire a systemic and interdependent viewpoint that helps formulate realistic projects of change that can be implemented.

e) Temper expectations of the results of change to avoid unfounded aspirations, outclassed expectations, deceptions, and subsequent resistance.

f) Generate the expectation of gradual, continuous, and progressive change, according to programmed direction, to avoid the notion that change brings about undetermined results and is guided only by momentary pressure.

# Basic Principles for UNI Project Evaluation

Alfonso Mejía Vanegas and María Mercedes Villalobos

One of the UNI Program objectives is to promote innovative experiences in health professional education, by using models that value cooperation between educational establishments, service delivery institutions, and geographically defined communities (catchment areas).

In this program, evaluation is aimed at refining the process of change and intervention in a coordinated manner: in the university, health services, and community. For this, evaluation should generate decision-making processes and more effective strategies for improving health service and personnel training programs.

This management function is becoming increasingly important. No program or service can be considered complete if it does not include an evaluation element, defining what, how, when, and why to evaluate. These questions are essential for the usefulness and timeliness of the evaluation.

## Conceptualization

To evaluate is to issue a value judgment. It is a subsidiary function of management by objectives, to improve execution and results.

To evaluate is to learn through experience, systematically, so that improved planning and development of projects, and more favorable options, can be created for the future. The UNI project should consider evaluation to be a permanent process for increasing suitability, efficiency, and effectiveness of health care and educational activities; evaluation also can help streamline communications among participants in those activities, with actual community participation in all steps of the decision-making process.

Since evaluation is a tool in the decision-making process, it would be a distortion of its use and a waste of resources not to use results of the evaluation to decide on the destination of programs and services. Evaluation results should support the decision to continue, redirect, or stop an action under way.

Evaluation assumes that minds and attitudes will be open to constructive criticism, so that valid judgments can be made. It should be used constructively and impartially and not to justify or discover mistakes in previous actions. In UNI projects, this implies a tendency toward open communication among peers in academic and service sectors, with other individuals and groups involved at different political and operational levels and, basically, with the community.

## Scope of the Evaluation

In every country, the evaluation of health programs is part of a broader process of national health development - basically a management process - with a set sequence of actions and functions summarized in Figure5.
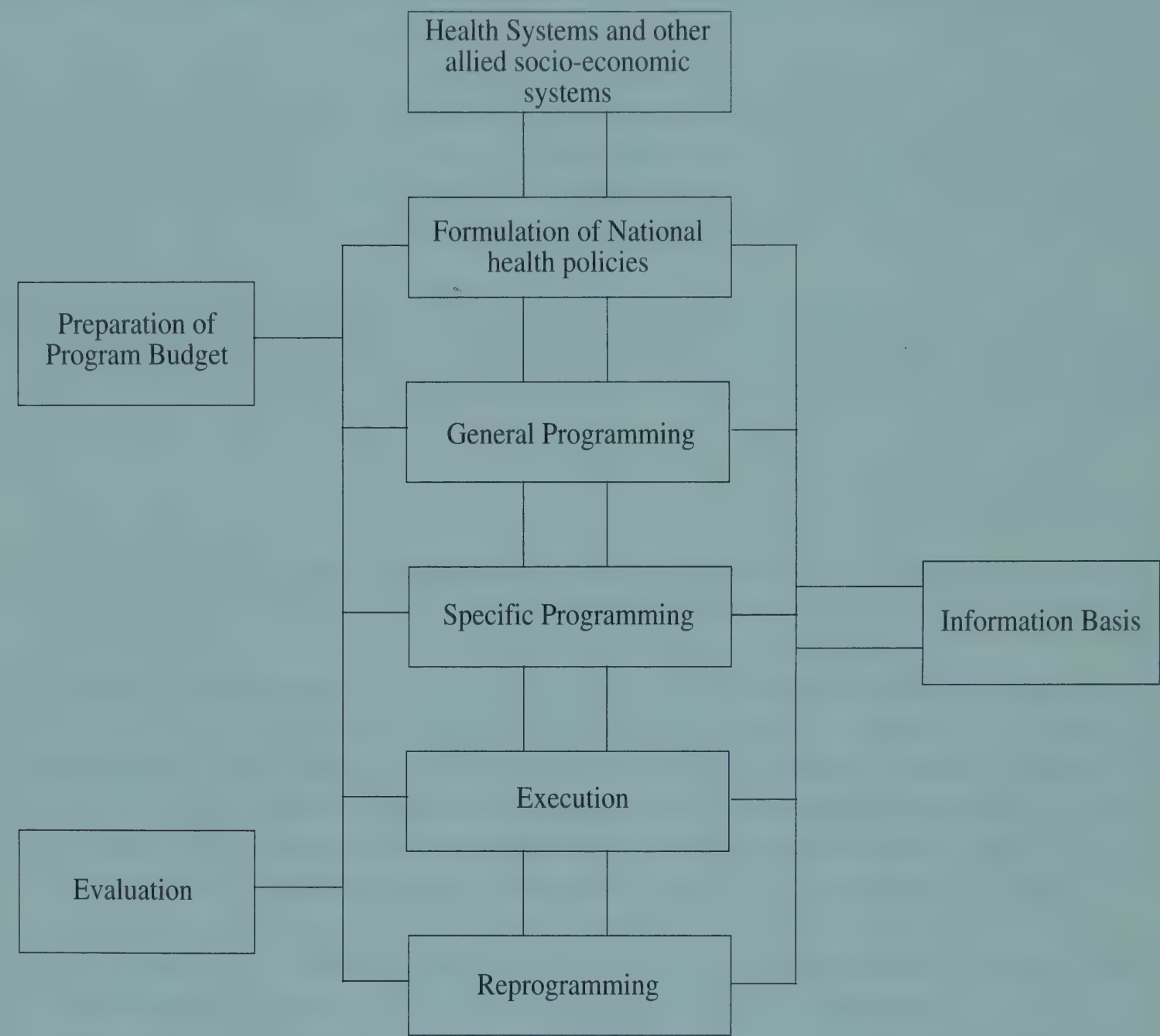


Figure 5. Management process for national Health Development

In this context, the evaluation is aimed at improving programs and services that guide the distribution of human and financial resources. This premise is supported by the following assertions :

• The inclusion and basic principles of the evaluation function in the management process for national health development is maintained independently of the object to be evaluated, or from political or administrative levels to which it applies.

- The evaluation process is flexible and its methods and contents should be applied to the circumstances and nature of each program.
- Evaluation is not an isolated or periodic function, disassociated from other management functions, but it is closely linked to such.
- The foundation for proper evaluation is laid when the project, activity, or service is formed; consequently, proper evaluation requires quality in that formation process.
- Evaluation should be considered from the beginning of the planning process so that its indispensable information base and other requirements (personnel, budget, time, etc.) can be taken into account on a timely basis. It is even more important that policy, objectives, goals, operational plans, standards, and techniques be determined with a view to objective evaluation.
- Individuals and groups responsible for this management process are also at least partially responsible for the evaluation at each administrative level.
- Evaluation responsibility should be shared and should involve whichever personnel are affected by the process at each administrative level; this involvement is necessary because the evaluation process eventually touches on delicate subjects, and requires discretion, unequivocal, and impartial judgment, in addition to clear presentation to all parties.
- Process options and occurrences should be registered daily to provide support for decisions, if necessary.

## Indicators and Criteria

To evaluate is to compare. Therefore, evaluation requires the definition of parameters, standards, and norms for measuring the nature and magnitude of change. This measurement process demands indicators, or variables, to quantify certain features of a situation or program; to measure change that occurred in a given period by comparison; or to measure differences existing among various programs and situations at a given moment.

Indicators are important because they are quantitative, reducing the subjectivity of judgment. The limitation of variables, however, is that they are - by nature - only indexes, reflections, or indirect expressions for the phenomenon, or the characteristics, being analyzed; those phenomenon or characteristics are not always easy to quantify. Indicators are used when it is not feasible to measure change directly.

Ideally, indicators should be valid (measure the change they supposedly reflect); objective (show the same results when the measurement is performed, in analogous conditions, by different individuals); sensitive (register the changes that occurred); and specific (registering only the pertinent changes of the situation in question.) In real life, there are relatively few indicators that fill all of these requirements, thus their scientific value must be considered with a certain amount of modesty.

An indicator is not sufficient in itself, but is complementary, which is why indicators tend to be combined. Frequently, they are used in different combinations, especially to evaluate the effectiveness of program and project effects.

WHO prepared a list of 39 indicators that are used most often and handled with ease. Those indicators were classified into five categories:
1. Health policy indicators.
2. Social and financial indicators.
3. Health service delivery indicators.
4. Primary health care coverage indicators.
5. State of health indicators.

A listing of these indicators, by category, can be found in Appendix 4.

When adequate indicators for a specific situation are not available, selected criteria are used as standards to measure certain actions. They can be technical and social; the technical, in general, are very specific to each program.

Because it is not desirable to issue opinions or reports that simply contain a summation of numerical values resulting from quantitative criteria, it is necessary to remember the main purpose of the evaluation criteria: to lead to the interpretation of values through reflection.

Assessment criteria for health programs should be quantified whenever possible, something that does not usually occur in practice, especially in the case of social criteria. As a result, it is often necessary to resort to assessments that are based on qualitative determinations.

We must remember that some activities do not have indicators or criteria for assessment. In these cases, ask questions that are pertinent to the activity to be assessed.
- Is there evidence of political support for health activities?
- Are there mechanisms to assure community participation in decision-making processes regarding health?
- At what level and in which way does community participation take place?

It is important to avoid frequent conflicts between evaluators - between those who are interested only in mathematical quantification, and those who tend to reject quantification and use only subjective assessments. This polarization is counterproductive because both approaches are useful and applicable, alone or combined, depending on the circumstances. Maintain an impartial, analytical attitude to select which evaluative approach to use. When convenient, use both the quantitative approach (to obtain data through formal procedures) and the qualitative approach (to support decisions). In this way, one can combine precision - when it is needed - with an analysis that is based on observation and reflection, and allow for timely and early interventions.

## Evaluation Perspectives and Components

To distinguish efficient from inefficient programs, and to plan and develop innovative initiatives with positive results in the community, it is essential that politicians, sponsors, educators, planners, and service personnel have reliable answers to questions such as:

- What is the nature and scope of priority problems?
- What interventions are needed to reduce problems?
- What is the target population for proposed interventions?
- Is the intervention being handled in the manner expected?
- Is the intervention effective?
- How much is the intervention costing?
- What is the cost-effectiveness of the intervention?
- What alternatives of intervention can be considered in the future?

In summary, there are five steps in the evaluation process:
1. Deciding what will be evaluated and selecting indicators for pertinence, efficiency, and effectiveness.
2. Collecting the necessary information.
3. Comparing the results with goals and objectives.
4. Judging the degree to which goals and objectives have been met.
5. Deciding if the program should continue without adjustments, whether it should be modified, or interrupted.

The process has a wide scope, with the following components and phases:
- Defining the evaluation objective or subject.
- Obtaining the necessary information.
- Verifying pertinence.
- Assessing suitability.
- Examining progress
- Evaluating efficiency.
- Evaluating effectiveness.
- Evaluating effects.
- Concluding and formulating proposals for future action, or deciding if the program, project, or service should continue without modifications, whether it should be modified, or interrupted.

### Subject or Object of Evaluation
The determination of the object or subject of the evaluation is a vital phase, without which progress would be virtually impossible. Thus, it requires much reflection and debate. WHO proposed a series of questions to facilitate the definition of the subject for evaluation. Those questions, presented here, have been adjusted to the needs of the UNI initiative:
- What should be evaluated? (system, program, project, service, institution, network, the

work of a group, individual performance, a function such as - for example - budget execution or schedule).

- At which level? (global, multinational, intermediate, local, institutional).
- For what purpose? (routine, special, follow-up and control, annual budget).
- What are the limitations? (personnel availability, access to information, time for execution, financial resources, community attitude, receptiveness of users of evaluation results, background, or answers to previous evaluations).
- What are the options for decision? (proceed, modify, close, accelerate, consolidate, refinance).
- To whom should results be communicated? (program administrators, sponsors, the community, individuals in change of execution and operation, dean, director, faculty).

### Strategy for Information Collection

This phase should be programmed meticulously during project planning to avoid interruptions during the evaluation. Answers to the following questions are essential: What information is necessary? What are the available sources of information?

Information systems are more inclined toward national health system and service provider needs than those of the community to be served by these systems. There is a tendency to use them as an end in themselves, a tendency that is contrary to the reason for their existence. Information only has a value as input or output of action.

Actually, little attention is given to this question: What do we need to know about local services and the communities to improve the quality of political and administrative decisions in the health field?

Appendix 5 contains additional considerations, adapted from the WHO document, about information needs.

### Pertinence

On the one hand, "pertinence" means that the social, political, and financial elements of health policy correspond to one another. On the other hand, it means that programs, objectives, and activities share some internal consistency, so that all respond to the needs of the community, and personal and health services development priorities.

The following questions must be asked:
- Do health policy, strategy, plans, and activities respond to community priority problems?
- Are health activities and objectives related?
- Is there consistency between services and institutions?
- Are all of the elements congruent with others?

This consistency is critical because if the evaluation shows discrepancies among problems,

policies, projects, services, objectives, and activities, it is necessary to redirect or interrupt the program.

### *Suitability*
"Suitability" refers to the adequate and timely availability of input, resources, and necessary infrastructure for operations expected in general programming.

As an illustration, the following questions are suggested:
- Were the problems reformulated correctly in terms of magnitude, seriousness, repercussions, population affected, persistence, etc.?
- Are the objectives and goals realistic?
- Has a plan of action and a schedule been established to attain the objectives?
- Are input and resources sufficient for actions proposed in the time expected?

If the evaluation of suitability is not positive, it may be necessary to reformulate the problem, change the operational plan, or increase or modify the nature of resources.

### *Progress*
"Progress" is determined by comparing what has been attained or modified in health services and in educational strategy in a specific period, to the goals and objectives that were proposed; this comparison will show whether corrective action is needed.

The following questions are suggested for progress evaluation:
- Is the schedule of operations being followed?
- Is the flow of resources satisfactory?
- Are the outcome compatible with resources spent?

Using procedures for assessing the rate of progress will set the stage for daily follow-up activities to decide on the flow of resources and the expected schedule.

### *Efficiency*
"Efficiency" refers to the results of a program, or of a health activity with resources (personnel, funds, technology, time) used for its development. Efficiency evaluation improves execution and contributes to progress analysis; surveillance results are its base. Thus, it is useful to examine plans and operational schedules, applied methods, and the use of personnel and resources.
The following questions may help in the process:
- Are the most appropriate technology and methods selected to solve the problem?
- Is personnel structure adequate?
- Are material and financial resources distributed equitably?
- Is management effective?
- Is the project cost-effective?

In the case of inadequate projects, the quality of the management process is usually questioned.

### *Effectiveness*

Evaluating "effectiveness" means estimating the results of a program, service, institution, or activity and comparing those results to the magnitude of the problem or unsatisfactory situation. "Effectiveness" quantifies the attainment of objectives and, when unsatisfactory, calls for project reformulation and health establishment service restructuring. If quantification is not feasible, the usefulness of the work that has been performed should be analyzed qualitatively until a measurement is reached. Effectiveness evaluation also includes the level of satisfaction of the community with results obtained. If possible, cost-effectiveness and cost-benefit relations should also be evaluated.

The following questions are explanatory:
- To what extent were proposed objectives met, and how much has the problem in question been reduced?
- Which changes were detected in selected indicators?

Effective evaluation depends on an adequate definition of the problem, the formulation of goals and objectives, and the selection of indicators and the base of information.

### *Effect*

"Effect" refers to the general influence or impact of a program, service, or project on the level of health, attitudes, personnel performance, and - especially - institutional behavior. An unfavorable evaluation of effect suggests that change might be needed in service orientation and/or personnel training strategy.

The following question illustrates the scope: To what degree can changes observed in the level of quality of life be attributed to health actions?

This question is difficult to answer. Evaluation of effect requires quantitative indicators, a complex information base, special research, and considerable time and resources.

## Information Base for Evaluation

Information is an indispensable ingredient for evaluation. Reliability depends, above all, on the quality of the information, its pertinence, specificity, sensitiveness, and timeliness.

Planners and evaluators are usually insatiable with regard to information, but are usually not aware of the high cost of producing, processing, analyzing, storing, and retrieving information. Today, data is stored in enormous amounts and is considered a symbol of prestige.

One must use very strict criteria to collect only minimal information, but it must be sufficient and of indispensable quality to support decisions. It is not necessary or desirable to obtain highly precise and costly information when it is possible to make a decision with reasonably approximate data. Frequently the most needed information is not available and obtaining it is costly. In this respect, we should remember the "Law of Finagle":

- The information one has is not what one wants.
- The information one wants is not what can be obtained.
- The information one can obtain costs more than one is willing to pay.

Necessary information is diverse and varies according to the nature of programs and evaluation objectives; it can be of a political, social, cultural, educational, economic, and administrative nature, relating to subjects, or groups of subjects, depending on the scope of the evaluation (global, national, regional, institutional, etc.). Consequently, the data to be solicited can be historical, political, technical, scientific, social-economical, legal, administrative, or operational, and may have to do with the health sector or another corresponding sector.

Information may or may not be available. In the former case, it is usually dispersed over various sources. In the latter instance, the information must be generated through deliberate collecting efforts or special studies.

## Evaluation Limitations

Evaluation has its own problems and limits, in addition to others that are inherent to the social sectors in question. This is because it is not always possible to measure how many of the objectives have been reached in health and education. Under these circumstances, one is compelled to resort to qualitative judgments with the support of quantitative and reliable information.

The multifaceted nature of health and education problems, and their relation with other social and economic development aspects, causes this situation. Many changes in these problems are mere repercussions from actions by other sectors and vice-versa: some health and education actions may contribute to development and also give rise to problems in other sectors.

A difficulty inherent in evaluation is that some will question whether it is an indispensable management function, and be skeptical about it. These attitudes, which can lead to defensiveness or rejection of evaluation methods, stem from the fear that evaluation outcomes will imply a loss of authority, status, or power of program protagonists.

One of the main difficulties in evaluation lies in the unfounded suspicion by administrators that the information and evaluation are ways of observing their activities and productivity.

There are also individuals who do not consider evaluation methods to be sufficiently scientific and reliable enough to be the basis for change.

Often, decisions on the distribution and use of resources for evaluation do not have to be based on strictly exact data. Very frequently approximations are sufficient.*

* The principles in this chapter were adapted from the publication *Health Programme Evaluation: Guiding Principles. Health for All Series no. 6, World Health Organization, 1981.*

## Conclusions and Proposals

- Anticipate the general orientation and probable nature of evaluation results so that you can make proposals about what data and information will be required to support conclusions and proposals.
- Planning should include an inventory of different sources of information and assure the quality, adequacy, and availability of information. Otherwise, estimate which resources will be indispensable in obtaining the unavailable information; if needed, consider and program surveys, research, and special studies.
- The main sources of systematic information on health are:
- Official reports of social and economic policy development.
- Annual reports by ministries of health and education, and by educational establishments.
- Epidemiological information.
- National health plans.
- Demographic annuals.
- Data on resources used.
- Activity reports by related institutions.
- Development plans of human resources for health.

# Appendix 1

## List of institutions with UNI projects

Universidad Nacional de Tucumán
San Miguel de Tucumán, Argentina

Universidade de Brasilia
Brasilia, Brasil

Universidade Estadual Paulista
"Júlio de Mesquita Filho"
Botucatu, SP, Brasil

Universidade Estadual de Londrina
Londrina, PR, Brasil

Fundação Municipal de Ensino
Superior de Marilia
Marilia, SP, Brasil

Universidad de la Frontera
Temuco, Chile

Universidad de Chile
Santiago, Chile

Universidad del Valle
Cali, Colombia

Universidad de Antioquia
Medellin, Colombia

Universidad de Colima
Colima, Mexico

Universidad Autónoma de Nuevo León
Monterrey, Mexico

Universidad Autónoma Metropolitana Xochimilco
México, D.F., México

Universidad Autónoma de Nicaragua
León, Nicaragua

Universidad Nacional de Trujillo
Trujillo, Peru

Universidad de la Republica
Montevideo, Uruguay

# Appendix 2

## Glossary

1.  *Situation*: appreciation of the reality faced by a social participant from his perspective of the problem.

2.  *Scenario*: description of a set of situations faced by social participants at a given moment. It is an "objective" description.

3.  *Target situation*: the precise situation that a participant pursues normatively with his strategy and plan.

4.  *Initial situation*: situation at the initial moment of planning strategy. It contains an explanation of how one arrived at this situation traditionally, and what tendencies are for the future: it is the situation at the start of any trajectory.

5.  *Situations trajectory*: sequence of situations, where each previous situation has only one curve of connection with the situation that follows. It is the launching of projects in a determined sequential order.

6.  *Course of action*: the trajectory chosen as central to a strategy or plan.

7.  *Target-image* (or concrete utopia): a general normative design, outside the time schedule of the plan, that guides a participants' strategy. The target direction towards the situation is determined by target-image.

8.  *Directional program*: Proposal by a participant through which he/she explains the initial situation, defines the target situation and indicates, normatively, strategic action projects needed and adequate to change the initial situation and reach the target situation.

9.  *Strategic project*: a coherent set of actions, programs, and policies, produced by a participant, with the intention of significantly changing the initial situation in a planned direction.

10. *Policy (capitalized)*: a concept that may be used as a synonym for a directional program.

11. *Policy (not capitalized)*: a set of instrumental dispositions to attack an actual problem and reach a partial objective.

12.   *Strategy*: a means of effecting immediate situational change to arrive at the target situation. It is the way of implementing a Policy, through the implementation of policies.

13.   *Tactics*: the use of resources to arrive at a situation in the context.

14.   *Plan*: calculation of a participant that precedes and presides his/her action in relation to the orientation of the change selected. Such a calculation has at its core current decisions and receives feedback from the simulation of the future.

15.   *Option*: alternative of social production or situational change where the participant is able to decide or choose a trajectory, or to imagine and attribute a probability of occurrence.

16.   *Variant*: alternative of social production or situational change where the participant is not able to choose a trajectory, or imagine and attribute a probability of occurrence.

17.   *Action*:unitary component of a sub-project or project; the smallest composing unit of social production flow of a specific participant.

18.   *Social production*: flow of political, economic, social, cultural, warlike events, that different participants produce in the situation.

19.   *Analysis of internal coherence or consistence of the directional program*: study of proposals and projects, in terms of the degree in which necessary and adequate conditions are present, to attain the target situation.

20.   *External coherence analysis*: study of proposals and projects, indicating their relation with general policies, governing the probable scenario for their development.

21.   *Feasibility study*: explanation of necessary requirements so that proposals and projects may be realized. This requires at least an approach to problems of constraints that exist for project materialization, in three dimensions: a) inefficiency of the promoting force or drive to overcome resistance by opposing forces;  b) inefficiency of financial resources in relation to the scope, scale, or cost of proposed projects (this could also be called financial feasibility);  c) inadequate or deficient operational capacity of instructions that would be responsible for execution.

22.   *Directional analysis*: explanation of political, economic, and cultural consequences in project materialization, under the assumption that their realization is possible.

# Appendix 3

# Important Variables of the Strategic Diagnosis in UNI Projects

There are various terms and work sequences used when working on diagnosis, and suggested texts in literature provide a wide view on the subject. In this appendix, we adopted the terminology of systems' theory (structure, process, and outcome) as pivotal to analyze institutional aspects, because it is easy to understand and provides opportunities to include different aspects of reality; we are aware, nevertheless, of the limitations this presents to address various other aspects that should be analyzed, such as interinstitutional relations, just to mention one.

## Health Services Diagnosis

A strategical diagnosis of health services will imply in the analysis of different structural, process (emphasizing service products) outcome and impact of actions, both from the quantitative as well as qualitative standpoint. The following list is not exhaustive, but indicates various aspects that should be analyzed:

### *Structure*
- Physical plant (number, type, operability, conservation, suitability to needs, distribution).
- Human resources (number, qualifications, distribution, suitability to needs, motivation to work with the community, time dedicated to service, etc.).
- Equipment (type, distribution, quality, operability, conservation, suitability to needs).
- Organizational structure: formal and informal.
- System financing.

### *Processes*
To make the analysis less cumbersome, we can divide processes into two types: those relating to the application of health technology and those relating to managerial processes.

Processes for the application of health technology:
- Application of available technology (ex.: medical consultation, health education, home visits, pre-consultation, low/high complexity surgery, outpatient surgery, etc.).
- Organization of actions in specific programs (maternal-child health, immunization program, epidemiological surveillance, sanitary surveillance, hypertension control, etc.).
- Existence of quality control programs (hospital infection control, monitoring of immunization program effectiveness, etc.).
- Programs for technological development of personnel (continuing education, supervision, incentive schedules for improvement, etc.).

Managerial processes:
- Supply management systems.
- Existence of a management information system and its use for control and decision-making processes.
- Coordination and control mechanisms;
- Referral and back-referral systems;
- Financing and budget execution systems;
- Human resource policies;
- Management models: organization and methods;
- System productivity.

### Products

In essence, products - consultations, hospitalizations, etc. - can be considered as a part of the process (as appropriately discussed by Donabedian). To facilitate analysis, however, we would like to treat them separately. The most important aspects to be considered in diagnosis are:
- Type and complexity of services offered.
- Number of services offered (consultations, hospital discharges, surgery, laboratory tests, etc.).
- Service quality.
- Suitability of services (number and types) in relation to demand and estimated needs.

### Outcome

Undoubtedly, one of the most difficult aspects to evaluate is the final effect of services on the evolution of the state of health of the population, or users. This is one of the reasons why evaluation studies concentrate more on processes. In spite of the difficulty in obtaining objective (not to speak of precise) information, it is necessary to estimate these results. Variables to be addressed are:
- User satisfaction levels.
- Procedure effectiveness and resolvability.
- Efficiency in the use of resources.
- Level of population coverage.
- Level of meeting demands and needs.

One may question whether these variables really relate to results and not procedural aspects. This question, however, is not relevant at this time, since the proposed classification was merely didactic and what we are really trying to obtain is knowledge of important system variables.

### Context

We understand the context of a system (or an organization) as environmental variables that exert direct or indirect influence on performance and output of that system, and about

which the administrator has no decision-making power. The "immediate context" identifies factors with a more direct influence on the organization and on which we might even exert some indirect action for change (through persuasion of other decision-makers) although we cannot decide directly. It is also possible to identify a "mediate context," with phenomena that influence our organization more indirectly and on which we might not expect to exert the power of change at least in the short-term.

Immediate context:
- Relations with other health units not belonging to the system.
- Relations with organs of higher hierarchical levels (regional or central levels).
- Relations with the target community, in particular with neighborhood associations.
- Relations with establishments for the education of human resources in the region.

Mediate context:
- Health policies of national, or macro-regional scope.
- Competition among State, quasi-State, and private sectors.
- Evolution of the social-economic situation of the population.
- National or regional political situation.
- Population mobility.
- Union movements.
- Communication means.
- Policies for education of human resources for health.
- Development of new health technology.

## Diagnosis of University, Health Professions Schools, and Careers

Following the same structure as in the previous item, the following are some important variables to be addressed:

### Structure
- Physical plant (suitability to needs, distribution).
- Installations in health services used for teaching.
- Human resources (number, suitability to needs, qualifications, distribution, time dedicated to teaching activities, motivation, openness to behavioral change and teaching methodology).
- Educational equipment (type, distribution, number, operability, conservation, suitability to needs).
- Organizational structure.
- Financing.

*Processes*

Educational processes:
- Scientific-technological development programs for faculty.
- Didactic-pedagogic continuing education programs for faculty.
- Course structure and organization (curricular design, teaching/learning experiences).
- Teaching methodology.
- Student and teacher evaluation methodology.
- Student and teacher relationship with health services.
- Student selection processes.

Management processes:
- Existence of a management information system and its use in decision-making.
- Coordination and control mechanisms.
- Human resources policies.
- Management style.
- System productivity.

*Products*
- Types of courses and careers offered.
- Number of courses offered and students served.
- Quality of education offered.
- Suitability of courses offered (number and types of courses) in relation to demand and estimated needs.

*Outcome*
- Excellence in personal qualifications of graduated students.
- Adequacy of professional qualifications to local and regional needs.
- Suitability of the quantitative profile of graduates to local and regional needs.

*Context*

Immediate context:
- Relations with other local educational facilities not belonging to the university.
- Relations with institutions at higher hierarchical levels.
- Relations with the community.
- Relations with professional committees and peer organizations.
- Policies for the education of human resources for the health sector.

Mediate context:
- Health policies of a national or macro-regional scope;
- National or regional political situation;
- Development of new health technology.

## Health Diagnosis of Selected Community

The concept of universality of the local health system is inherent in the UNI proposal. One should consider, however, that the population benefited by actions will be composed of the traditional users of health systems, open to the public. Therefore, this diagnosis should not only take into consideration indicators relating to the general population in the area selected, but also characteristics of specific segments that currently are users of the different existing health service sub-systems (social security, clients of public systems, etc.).

Main aspects to be addressed are as follows:
- An estimate of needs for health services.
  - size, growth, fertility, births, and population life expectancy;
  - mobility, social-economic and educational conditions;
  - housing and environmental conditions;
  - mortality indicators (main causes of mortality, proportional mortality, potential years of life lost);
  - morbidity indicators;
  - behavioral and environmental risk factors.
- Health needs felt by the population.
- Level of service demand and use.
- Satisfaction with services and credibility of services.
- Organizational forms and popular participation.
- Identification of popular sectors, groups, or associations involved in health matters.

## Relations Among University/Services/Population and Intra-Institutional Relations of Organizations Involved in the Program

The diagnosis of these relations is eminently qualitative, making it difficult to establish a structure or sequence for analysis. Indicators or evidence of the quality of these relations could assist in diagnosis. Some examples are:

### Relations Between the University and Services
- Existence of previous formal cooperation agreements.
- Use of service areas or segments of the services for teaching.
- Professional service personnel registered in university courses or continuing education programs.
- Availability of university continuing education courses or programs to health services.
- Cooperation (participation) of the university in health services research.
- Professors with a double working attachment (with the university and services).
- Professors or university graduates in charge of health services.
- Student participation in community activities and their motivation.

- Service personnel attitude with regard to the presence of professors and students in facilities and with regard to their participation in providing care.

### *Relations Between the University and the Community*
- Professor and student participation in health service activities.
- Availability of different university continuing education services.
- University participation in community initiatives.

### *Relations Between Services and the Community*
- Existence and type of operation by formal or informal committees of community representatives at health services.
- Existence and magnitude of extramural health activities.
- Credibility of the population in regard to services (reduction or increase of demand that can be satisfied by the services).
- User satisfaction with health services.
- Voluntary work at health services.
- Service participation in community activities not directly related to health problems (cultural, athletic, educational, civic).

### *Intra-Institutional Relations*
- Cooperation among health services segments in planning and executing work.
- Existence of formal committees/groups that meet regularly and congregate health service directors.
- Effectiveness and efficiency in referral and back-referral mechanisms.
- Existence and extension of joint operations (research or continuing education) among professors of different departments and/or careers.

## Appendix 4

## Useful Indicators for Evaluation

1. Health Policy Indicators:
   - High-level commitment to arrive at "Health for All".
   - Allocation of sufficient resources to primary health care.
   - Equitable level of resource distribution.
   - Level of community participation to attain "Health for All".
   - Establishment of an organizational and administrative structure suitable to national "Health for All" strategy.
   - Practical manifestations of international political commitment with "Health for All".

2. Social and Economic Indicators:
   - Population growth rate.
   - Gross national product or gross domestic product.
   - Income distribution.
   - Working conditions.
   - Adult literacy rate.
   - Adequate housing, expressed in number of persons per housing unit.
   - Availability of nutritional food per person.

3. Health Care Delivery Indicators:
   - Availability.
   - Material accessibility.
   - Financial and cultural accessibility.
   - Use of services.
   - Indicators to assess the quality of care.
   - Mortality rate of children under five.
   - Life expectancy at a specific age.
   - Maternal mortality rate.
   - Mortality rate by specific disease.
   - Morbidity rate by specific disease.
   - Disability rate.
   - Social and mental pathology indicators, such as suicide rates, drug addiction, criminality, juvenile delinquency, alcoholism, smoking, obesity, and the consumption of tranquilizers.

4. Primary Health Care Coverage Indicators:
   - Level of "health literacy".
   - Availability of drinking water in the home, or at a short walking distance.

- Adequate sanitary installations in the home or immediate vicinity.
- Access by mothers and children to local health care.
- Assistance in delivery (births) by trained personnel.
- Percentage of children immunized against major childhood infectious diseases.
- Availability of essential drugs throughout the year.
- Access to patient referral institutions.
- Number, in proportion to population, of the different categories of health agents at the primary health care and patient referral levels.

5. State of Health Indicators:
   - Percentage of newborn infants with a birth weight of at least 2,500 g.
   - Percentage of children whose weight, by age, corresponds to specific standards.
   - Psycho-social development indicators for children.
   - Mortality rate for breast-feeding children.
   - Mortality rate for children of a low age.

## Appendix 5

## Information Requirements

To be considered separately in each phase of the evaluation process:

**Subject**: define requirements on the type and scope of information in accordance with the intended evaluation and available resources (time, personnel, logistics, etc.).

**Pertinence**: collect information on the mission, policies, strategy, objectives, operations, procedures, and personnel.

**Problem definition**: re-examine problem characterization, context, intervention alternatives, allocated resources, and costs.

**Program or Project formulation**: define information required in relation to objectives, goals, standards, procedures, personnel, budget, infrastructure, operation schedule, commitments, parameter review, criteria, and evaluation questions.

**Progress**: deduct the information needed based on the following indicators: existence of a daily activity register, reports on the use of resources, reports by personnel and supervision.

**Efficiency**: cross-section of project development on a given date, as can be deduced from objectives, plans, and operational schedules. Compare results with resources spent. Stipulate indicators, criteria, evaluation questions, and resources used, as a basis to estimate needed information.

**Effectiveness**: check the existence of information on health problems in question, the level of willingness to change them, and project development according to the operational schedule. Deduct needed information to build indicators, criteria, and pertinent questions.

**Effect**: verify previously, during planning, the availability of information on the level of health and related social-economic factors. Determine indicators, criteria, pertinent questions that were proposed as parameters to evaluate the project. With this base, define information requirements.